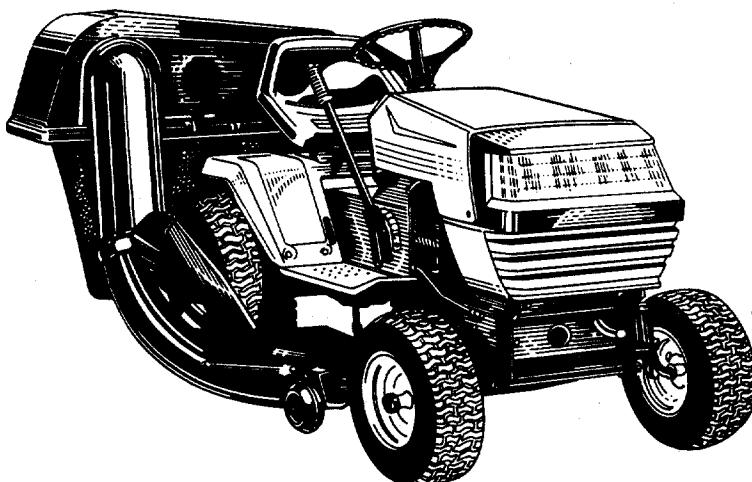


# OWNER'S GUIDE

• ASSEMBLY • OPERATION • MAINTENANCE • PARTS •

## 18 H.P. GARDEN TRACTORS



(Model 840 Shown with  
Optional Grass Collector)

**Model Series  
820 thru 829  
840 thru 849  
Garden Tractors**

### IMPORTANT!

Record the **Model No.** and **Mfg. Code** which appear on your unit in the space below. You **must** have these numbers, along with the date of purchase, in order to receive warranty or service.

**MEETS ANSI SAFETY STANDARDS**

MODEL NO.

MFG. CODE

**Important:**  
**Read Safety Rules**  
**and Instructions Carefully**



Made  
in  
AMERICA

**WARNING:** This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact MTD Products Inc, P.O. Box 368022, Cleveland, Ohio 44136-9722.

# IMPORTANT

## SAFE OPERATION PRACTICES



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR UNIT. WHEN YOU SEE THIS SYMBOL— **HEED ITS WARNING.**



**DANGER:** This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

### I. GENERAL OPERATION

1. Read, understand, and follow all instructions in the manual and on the machine before starting. Keep this manual in a safe place for future reference and for ordering replacement parts.
2. Only allow responsible adults familiar with the instructions to operate the machine. Know controls and how to stop the machine quickly.
3. Do not put hands or feet under cutting deck or near rotating parts.
4. Clear the area of objects such as rocks, toys, wire, etc. which could be picked up and thrown by the blade. A small object may have been overlooked and could be accidentally thrown by the mower in any direction and cause injury to you or a bystander. Always wear safety glasses or eye shields during operation or while performing an adjustment or repair, to protect eyes from foreign objects. Stop the blade(s) when crossing gravel drives, walks or roads.
5. Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
6. Never carry passengers.
7. Disengage blade(s) before shifting into reverse and backing up. Always look down and behind before and while backing.
8. Be aware of the mower and attachment discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the chute guard in place.
9. Slow down before turning. Operate the tractor smoothly. Avoid erratic operation and excessive speed.
10. Never leave a running machine unattended. Always turn off blade(s), place transmission in neutral, set park brake, stop engine and remove key before dismounting.
11. Turn off blade(s) when not mowing.
12. Stop engine and wait until blade(s) comes to a complete stop before (a) removing grass catcher or unclogging chute, or (b) making any repairs, adjusting or removing any grass or debris.
13. Mow only in daylight or good artificial light.
14. Do not operate the machine while under the influence of alcohol or drugs.
15. Watch for traffic when operating near or crossing roads.
16. Use extra care when loading or unloading the machine into a trailer or truck. This unit should not be driven up or down a ramp onto a trailer or truck under power, because the unit could tip over, causing serious personal injury. The unit must be pushed manually to load or unload properly.
17. Never make a cutting height adjustment while engine is running if operator must dismount to do so.
18. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Do not wear loose fitting clothes or jewelry. They can be caught in moving parts. Never operate a unit in bare feet, sandals, or sneakers.
19. Check overhead clearance carefully before driving under power lines, wires, bridges or low hanging tree branches, before entering or leaving buildings, or in any other situation where the operator may be struck or pulled from the unit, which could result in serious injury.
20. Disengage all attachment clutches, thoroughly depress the brake pedal, and shift into neutral before attempting to start engine.

### II. SLOPE OPERATION

Slopes are a major factor related to loss of control and tip-over accidents which can result in severe injury or death. **All** slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

#### DO:

Mow up and down slopes, not across.  
Remove obstacles such as rocks, limbs, etc.  
Watch for holes, ruts or bumps. Uneven terrain could overturn the machine. **Tall grass can hide obstacles.**  
Use slow speed. Choose a low enough gear so that you will not have to stop or shift while on the slope. Always keep tractor in gear when going down slopes to take advantage of engine braking action.  
Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.  
Use extra care with grass catchers or other attachments. These can change the stability of the machine.  
Keep all movement on the slopes **slow and gradual**. Do not make sudden changes in speed or direction. Rapid engagement or braking could cause the front of the machine to lift and rapidly flip over backwards which could cause serious injury.  
Avoid starting or stopping on a slope. If tires lose traction, disengage the blade(s) and proceed slowly **straight** down the slope.  
For your safety, use the slope gauge included as part of this manual to measure slopes before operating this unit on a sloped or hilly area. If the slope is greater than 15° as shown on the slope gauge, do not operate this unit on that area or serious injury could result.

#### DO NOT:

**Do not** turn on slopes unless necessary; then, turn slowly and gradually downhill, if possible.  
**Do not** mow near drop-offs, ditches or embankments. A wheel over the edge or an edge caving in could cause sudden overturn.  
**Do not** mow on wet grass. Reduced traction could cause sliding.  
**Do not** try to stabilize the machine by putting your foot on the ground.  
**Do not** use grass catcher on steep slopes.

### III. CHILDREN

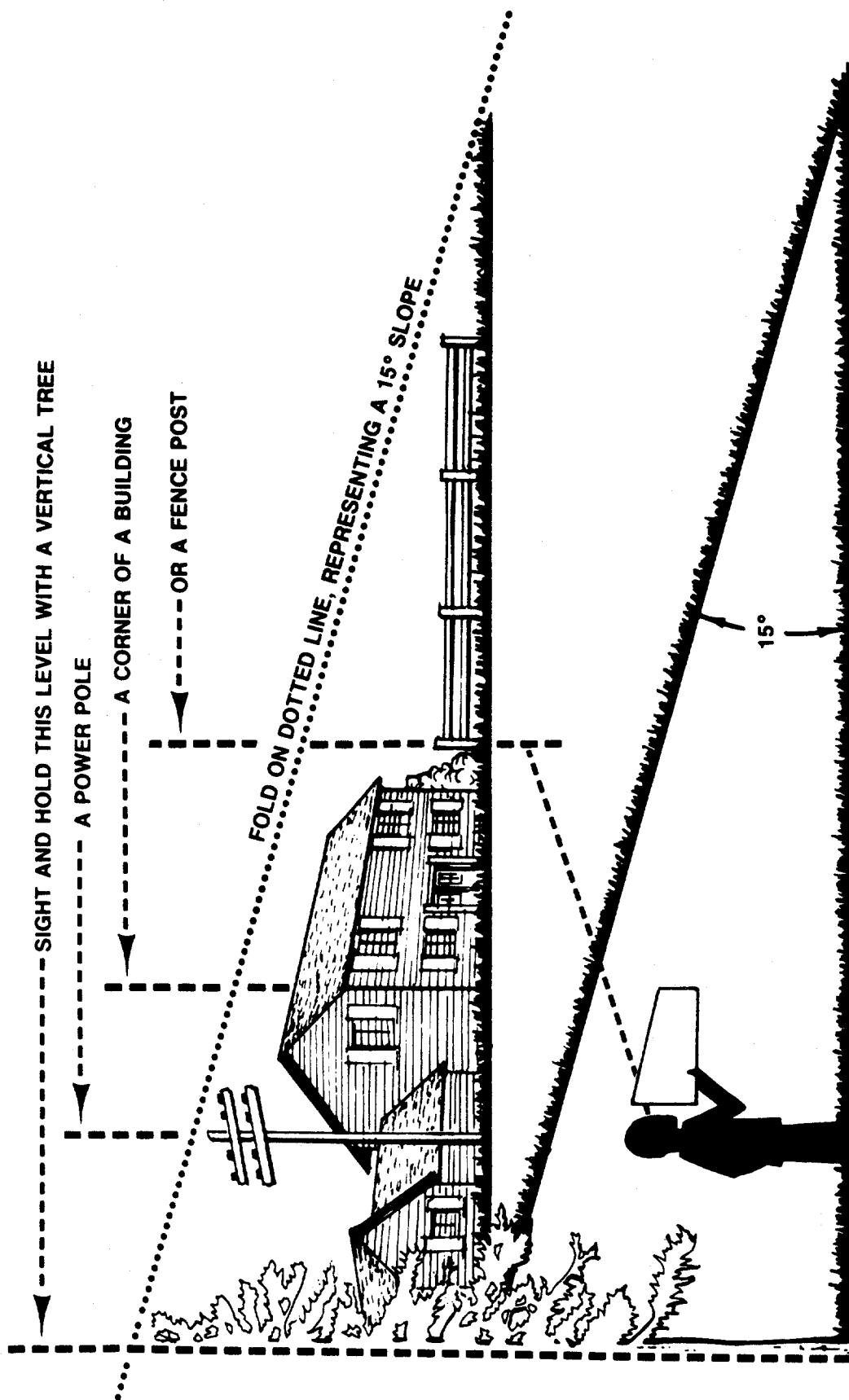
Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. **Never** assume that children will remain where you last saw them.

1. Keep children out of the mowing area and in watchful care of an adult other than the operator.
2. Be alert and turn machine off if children enter the area.
3. Before and when backing, look behind and **down** for small children.
4. Never carry children. They may fall off and be seriously injured or interfere with the safe machine operation.
5. Never allow children under 14 years old to operate the machine. Children 14 years and over should only operate machine under close parental supervision and proper instruction.
6. Use extra care when approaching blind corners, shrubs, trees or other objects that may obscure vision.

Cut Along This Line  
USE THIS SHEET AS A GUIDE TO DETERMINE SLOPES WHERE YOU MAY NOT OPERATE SAFELY.

# SLOPE GAUGE

(Keep this sheet in a safe place for future reference.)



Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury.

Operate RIDING mowers up and down slopes, never across the face of slopes.  
Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

# CONTENTS OF HARDWARE PACK

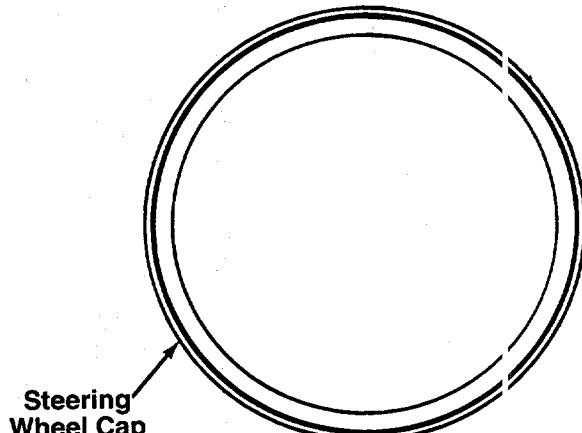
Remove this sheet from your owner's manual and lay the hardware on the illustration for identification purposes. Refer to the separate deck manual for any information concerning the deck. After assembly, keep the Slope Gauge which is on the reverse side of this sheet for future use.

(Hardware pack may contain extra items which are not used on your unit.  
Part numbers are shown in parentheses.)

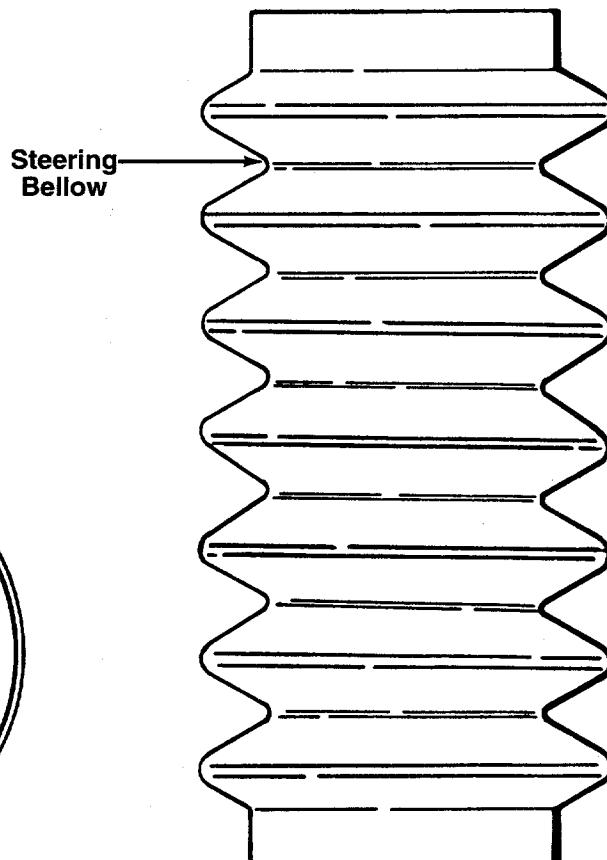
## A STEERING WHEEL INSTALLATION

Hex Lock Nut  
5/16-24 Thread  
(712-0237)

Cupped  
Washer  
5/16" I.D.  
(736-0242)



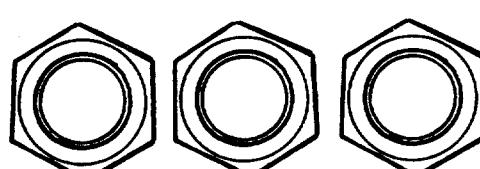
Steering  
Wheel Cap  
(731-0220)



## B ATTACHING THE DECK LINKS



Eyebolts  
(711-0817)  
(Not Shown to Scale)



Hex Nuts  
1/2-13 Thread  
(712-0206)

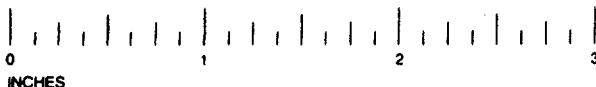
## C FINAL ASSEMBLY

Mounting Clips  
For Optional  
Hub Caps  
(727-0425A)  
Quantity—20



## D IGNITION KEYS

Not Shown—  
(May be  
Attached to  
Tractor)



#### IV. SERVICE

1. Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
  - a. Use only an approved container.
  - b. Never remove gas cap or add fuel with the engine running. Allow engine to cool at least two minutes before refueling. Do not smoke.
  - c. Never refuel the machine indoors.
  - d. Never store the machine or fuel container inside where there is an open flame, or spark, such as a water heater, space heater, clothes dryer and the like.
2. Never run a machine inside a closed area.
3. Check frequently and keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in safe working condition.
4. Never tamper with safety devices. Check their proper operation regularly. Use all guards as instructed in this manual.
5. To reduce fire hazard, keep machine free of grass, leaves or

other debris build-up. Clean up oil or fuel spillage. Allow machine to cool before storing.

6. Stop and inspect the equipment for damage if you strike an object. Repair, if necessary, before re-starting and operating the machine.
7. Never make adjustments or repairs with the engine running.
8. Grass catcher components are subject to wear, damage and deteriorate, which could expose moving parts or allow objects to be thrown. Frequently, check components and replace with manufacturer's recommended parts when necessary.
9. Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves and use extra caution when servicing blade(s).
10. Check brake operation frequently. Adjust and service as required.
11. Muffler, engine, and belt guards become hot during operation and can cause a burn. Allow to cool down before touching.
12. Do not change the engine governor settings or overspeed the engine.



**DANGER:** Your unit was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.

## ASSEMBLY INSTRUCTIONS

This owner's manual covers various models of tractors. The units illustrated may vary slightly from your unit. Follow the instructions which pertain to your unit.

**IMPORTANT:** After assembly, service engine with gasoline, and check oil level as instructed in the separate engine manual. Do not overfill.

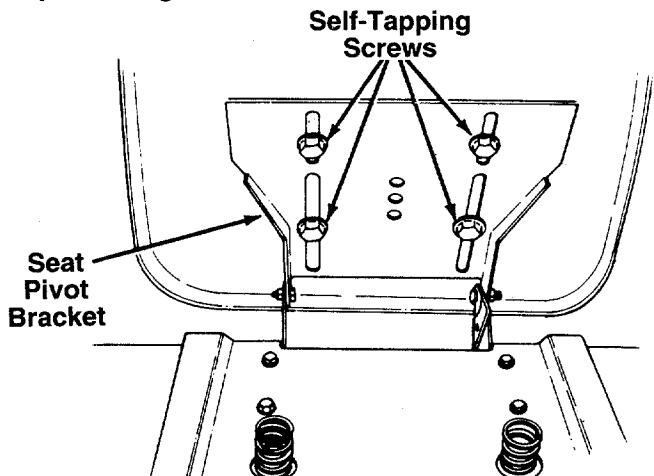


FIGURE 1.



### WARNING

- A. Battery acid must be handled with great care as contact with it can burn and blister the skin. It is also advisable to wear protective clothing (goggles, rubber gloves and apron) when working with it.\*
- B. Should battery acid accidentally splatter into the eyes or onto the face, rinse the affected area immediately with clean, cold water. If there is any further discomfort, seek prompt medical attention.
- C. If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water.

**NOTE:** Reference to right or left hand side of the unit is observed from the driver's seat, facing forward. Refer to the separate deck manual for all information regarding the deck.

### UNPACKING

1. Remove the carton from the tractor as follows. Open the top flaps and remove all carton inserts. Carefully cut on dotted line all the way around the carton. Lift the carton off the tractor. Remove the deck from beneath the tractor. Roll the tractor off the skid. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Remove page four from this manual and lay the contents of the hardware pack according to the illustration for identification.

### SEAT ASSEMBLY

Remove the four hex self-tapping screws from the bottom of the seat. Place the seat in position against the seat pivot bracket, lining up the slotted holes in the pivot bracket with the holes in the seat. Select desired position for the seat, and secure with hex self-tapping screws. See figure 1.

### BATTERY INFORMATION

- D. Since battery acid is corrosive, do not pour it into any sink or drain. Before discarding empty electrolyte containers, rinse them with a neutralizing solution.
- E. NEVER connect or disconnect charger clips to battery while charger is turned on as it can cause sparks.
- F. Keep all lighted materials (cigarettes, matches, lighters) away from the battery as the hydrogen gas generated during charging can be combustible.
- G. As a further precaution, only charge the battery in a well-ventilated area.

\*Always shield eyes, protect skin and clothing when working near batteries.

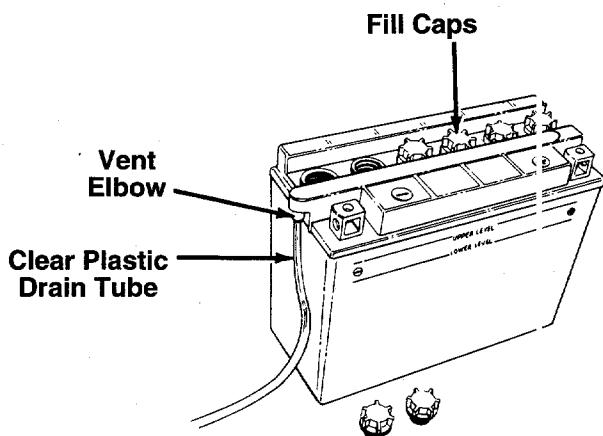


FIGURE 2.

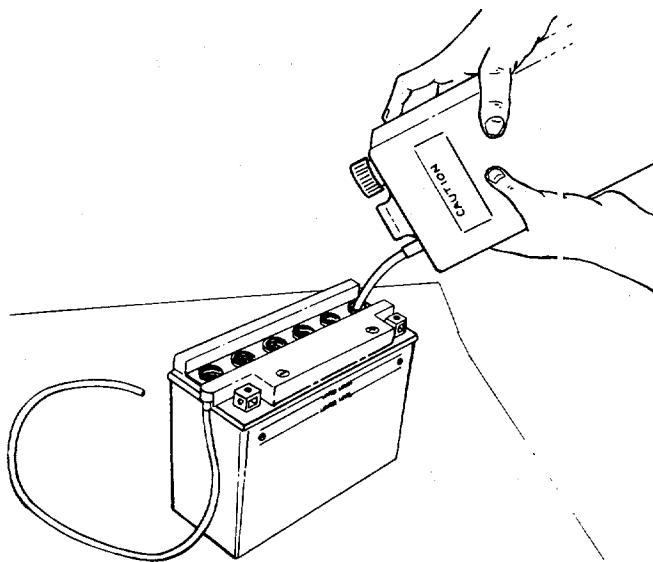


FIGURE 3.



### DANGER

**Battery contains sulfuric acid.** Refer to warning on page 5. Antidote: EXTERNAL—Flush with water. INTERNAL—Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Seek prompt medical attention. EYES: Flush with cool water for at least 15 minutes, then seek immediate medical attention.

**Since batteries produce explosive gases, keep all lighted materials (cigarettes, lighters, matches, etc.) away.** Be sure to charge battery only in well-ventilated areas.

KEEP BATTERIES  
OUT OF THE REACH OF CHILDREN!

### ACTIVATING THE BATTERY

Do not activate battery (fill with battery acid) until battery is actually placed in service. Be certain to read previous warnings before activating the battery.

1. Open the battery pack. Be careful not to puncture the box. It contains the **battery fluid (acid)** in a plastic container and one short plastic tube.
2. Remove the battery from the tractor by lifting the hood and removing the wing nuts and battery cover.
3. Place the battery on a table or workbench. Make certain the long plastic drain tube is in place on the vent elbow.
4. Remove the six fill caps from the top of the battery. See figure 2.
5. Place the battery fluid container on the table or workbench. Carefully cut off tip of the spout and attach the short plastic tube provided. Do not squeeze the container when cutting tip.
6. Fill each battery cell slowly and carefully to the **UPPER LEVEL** line marked on battery. See figure 3. Use caution as the acid level will rise rapidly after the bottom of the cell is filled.
7. **Allow battery to stand for 30 minutes** with the fill caps removed, while the plates absorb acid.

**NOTE:** You can continue assembling the tractor while battery is standing for 30 minutes (after filling with acid), and later while you are charging the battery.

### CHARGE THE BATTERY

**IMPORTANT:** To obtain the maximum life from your battery, it **MUST BE CHARGED** prior to initial use.

1. Check the acid level in each cell. If necessary, refill each cell with **battery acid** to the **UPPER LEVEL** line on battery. Replace the fill caps.
2. Before discarding the empty container, neutralize any residue with baking soda and rinse container with water. Puncture container several times before discarding.
3. **CHARGE THE BATTERY** after the 30 minute standing period. Use a 12-volt automotive type battery charger to **SLOW CHARGE THE BATTERY (DO NOT FAST CHARGE)**. DO NOT use a charger rated higher than 10 amps. **Charge the battery** for a minimum of 2 hours or until battery is fully charged.

**NOTE:** The information listed above is for initial charge. Refer to the Maintenance section of this manual for battery care and charging instructions to obtain the maximum life from your battery.

**IMPORTANT:** After battery has been charged, add only distilled water. DO NOT add acid.

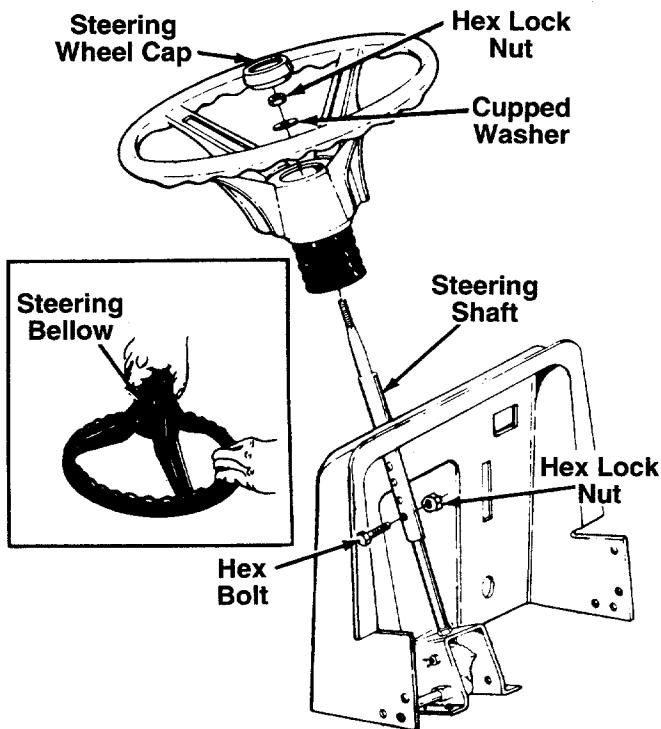


FIGURE 4.

## STEERING WHEEL INSTALLATION (Hardware A)

1. There are four height positions for the steering wheel. For shipping purposes, the steering shaft is assembled in the lowest position. Lift the hood of the tractor. Remove the hex bolt and hex lock nut on the steering shaft. Raise the shaft to desired position and secure with hex bolt and hex lock nut. See figure 4.
2. Attach one end of the plastic steering bellow to the steering wheel as shown in figure 4, inset.
3. Position the front wheels of the tractor so they are pointing straight forward.
4. Place the steering wheel (with steering bellow attached) over the steering shaft extending through the dash, positioning steering wheel as desired.
5. Place the washer with the cupped side down over the steering shaft. Secure with 5/16" hex lock nut. See figure 4.
6. Place the steering wheel cap over the center of the steering wheel so the logo can be read from the operator's position, and press on by hand.

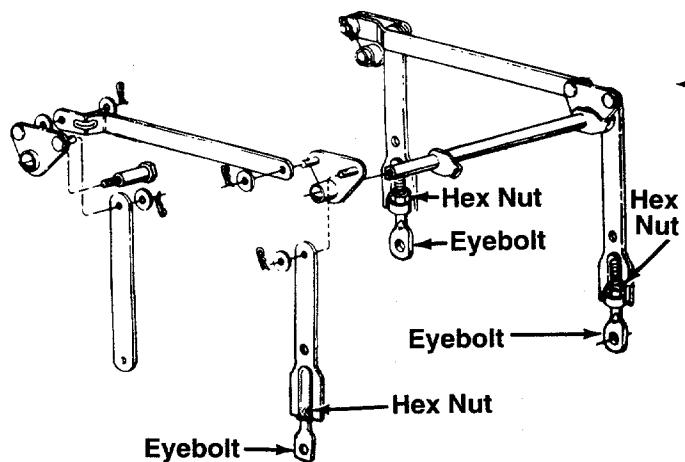
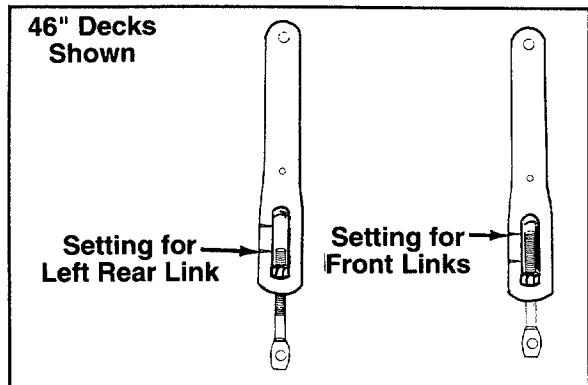


FIGURE 5.

## ATTACHING THE DECK LINKS (Hardware B)

The three adjustable deck links have been shipped unassembled. Attach as follows.

1. Start 1/2" hex nuts on eyebolts provided. Insert the hex nuts and eyebolts into the adjustable lift links as shown in figure 5.
2. Thread eyebolts into the lift links and hex nuts. The left rear link should be adjusted so the eyebolt is to the **lower** mark as shown. The two front links should be adjusted to the **higher** mark.

**NOTE:** This adjustment is for 46" decks only. For 44" decks, the eyebolts should be at the lower marks for all three links.

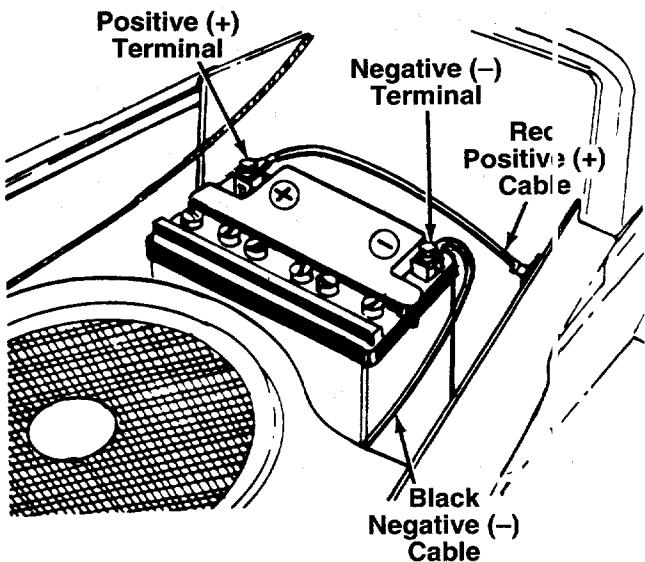


FIGURE 6.

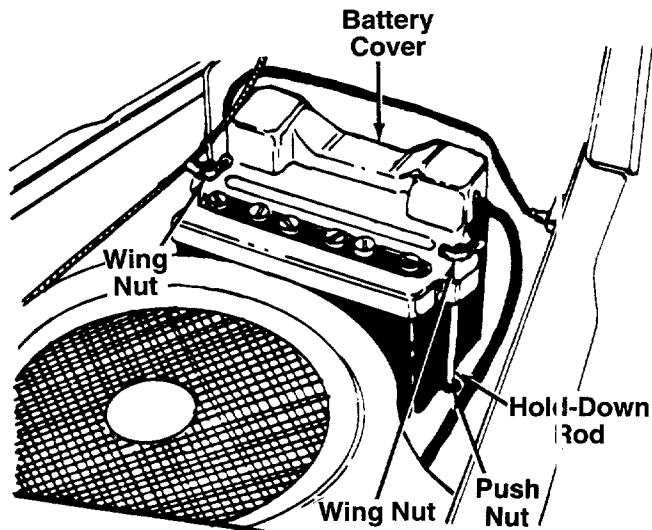


FIGURE 7.

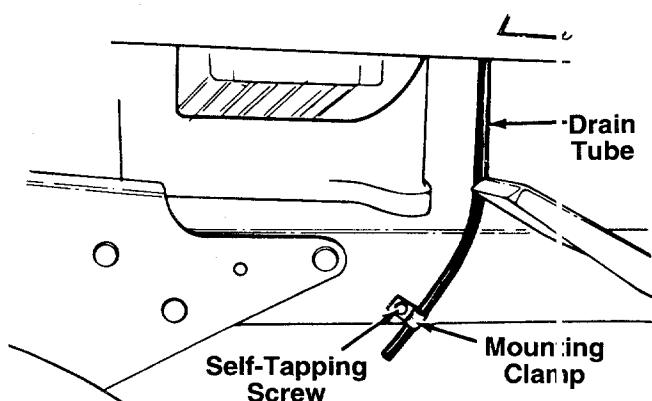


FIGURE 8.

## INSTALLING THE BATTERY

1. Place the battery on the battery plate with the terminals toward the rear of the tractor.
2. Remove the hex bolt and hex nut from each battery terminal.
3. Attach the positive cable (heavy red wire) to the positive battery terminal (+) with one hex bolt and hex nut. See figure 6.

**NOTE:** The positive battery terminal is marked Pos. (+). The negative battery terminal is marked Neg. (-).

4. Attach the negative cable (heavy black wire) to the negative battery terminal (-) with the other hex bolt and hex nut.
5. Place the black plastic battery cover in position over the hold-down rods. Secure with wing nuts.

**NOTE:** It may be necessary to pull up on the hold-down rods in order to start the wing nuts.

6. Route the battery drain tube over to the **left** side of the tractor. Loosen the self-tapping screw which secures the mounting clamp. See figure 8. Slip the end of the drain tube into the mounting clamp. Tighten the self-tapping screw to secure the clamp. Do not overtighten which could collapse the drain tube.

**NOTE:** The vented battery allows any gases or liquid from the battery to be drained onto the ground.

7. Trim end of drain tube if more than 1 inch extends below the frame.

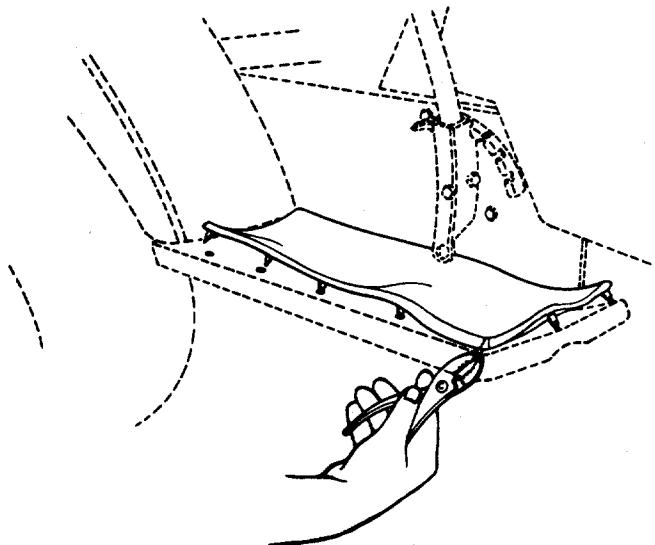


FIGURE 9.

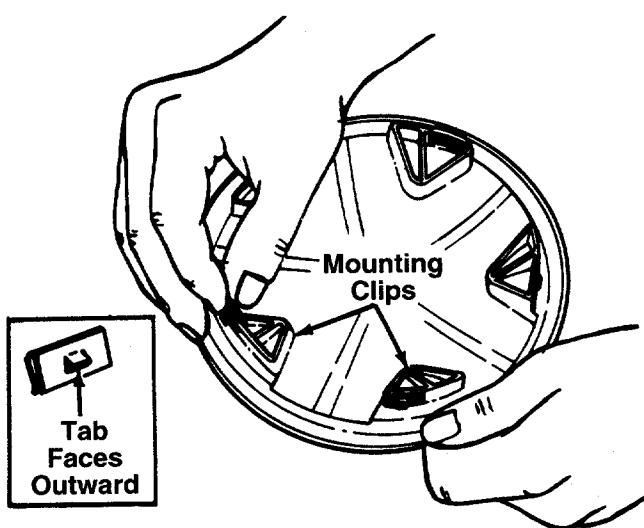


FIGURE 10.

## FINAL ASSEMBLY (Hardware C)

1. **Optional foot pads:** If not already assembled, attach foot pads as follows. Position one foot pad on top of the running board on the tractor, lining up the studs on the bottom of pad with the holes in the running board. Pull the studs through the holes in the running board using a pair of pliers. Repeat on other side of tractor. See figure 9.
2. If your tractor is equipped with **optional hub caps**, attach the four hub caps as follows.
  - a. Slide five mounting clips on each hub cap as shown in figure 10, with the tabs on the mounting clips facing outward.
  - b. Line up hub caps with wheel rims. Push hub caps on by hand.
3. Make certain **all** nuts and bolts are tightened securely.

## TIRE PRESSURE

The tires on your unit may be over-inflated for shipping purposes. Reduce the tire pressure before operating the unit. Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure).



**WARNING:** Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

## ATTACHING THE CUTTING DECK

If your tractor is equipped with a cutting deck, attach as instructed in the separate deck manual packed with your unit.

# CONTROLS

## IGNITION SWITCH

The ignition switch is located on the dashboard. Turn the key to the START position to start the engine. When the engine is running, leave the key in the ON position. To stop the engine, turn the key to the OFF position. See figure 11.



**WARNING: Remove the key from the tractor when the tractor is not in use to prevent accidental starting.**

## THROTTLE CONTROL

The throttle control is located on the left side of the

dashboard and is used to regulate the engine speed. See figure 11. The engine should be operated from 3/4 to full throttle (FAST) when operating any equipment that uses the tractor engine as a source of power such as the mowing deck, snow thrower or rotary tiller.

## CHOKE CONTROL

The choke control is located on the right side of the dashboard and is operated manually. Details for the choke operation are covered in the separate engine manual packed with your unit. See figure 11.

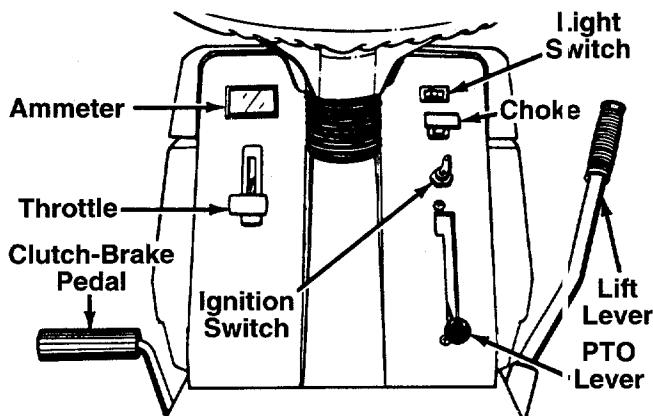


FIGURE 11A.—Models 843 and 848 Shown

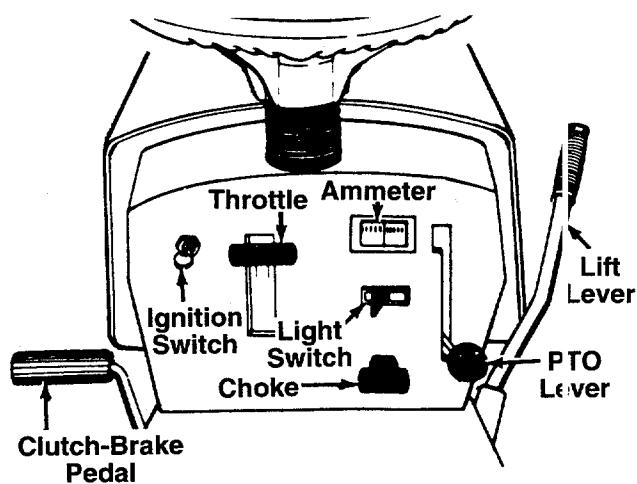


FIGURE 11B.—Models 842 and 847 Shown

#### LIGHT SWITCH (Optional)

The head lamps are operated by pushing the light switch located on the dashboard. The head lamps will only operate when the engine is running. See figure 11.

**NOTE:** If your unit is not equipped with a light switch, the lights will be on when the engine is running.

#### AMMETER (Optional)

The ammeter registers the rate of battery charge or discharge. The ammeter will register on the discharging side when starting the engine. It should register on the opposite side (charging) when the engine is running in the fast position until the battery is completely charged. With a fully charged battery or with the engine idling, the ammeter will not show a charge. See figure 11.

#### CLUTCH-BRAKE PEDAL

The clutch-brake pedal is located on the left side of the tractor. See figure 11. Depressing the clutch-brake pedal partway disengages the clutch. Pressing the pedal all the way down disengages the clutch and engages the disc brake.

**NOTE:** The clutch-brake pedal must be depressed to start the engine.

#### SHIFT LEVER

The shift lever is located in the center of the console and has four positions, HIGH, LOW, NEUTRAL and REVERSE. See figure 12. The clutch-brake pedal must be depressed and the lawn tractor must not be moving when shifting gears. Do not force the shift lever. Release the clutch-brake pedal slightly to line up the shifting collar in the transmission. Then try to shift gears.

#### PARKING BRAKE

To set the parking brake, depress the clutch-brake pedal and pull up the parking brake knob. It will stay in the raised position. To release the parking brake, depress and release the clutch-brake pedal. See figure 12.

**NOTE:** The parking brake must be set if the operator leaves the seat with the engine running.

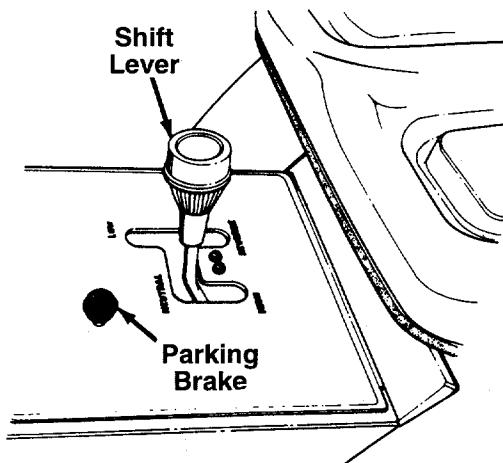


FIGURE 12.

#### SPEED CONTROL LEVER

The speed control lever is located on the left fender. It allows you to regulate the ground speed of the lawn tractor. See figure 13. To select the ground speed, depress clutch pedal. Push speed control lever outward and move backward to slow lawn tractor, move forward to increase speed. When desired speed has been obtained, release lever in that position. Whenever clutch is engaged, unit will automatically go to the pre-set speed.

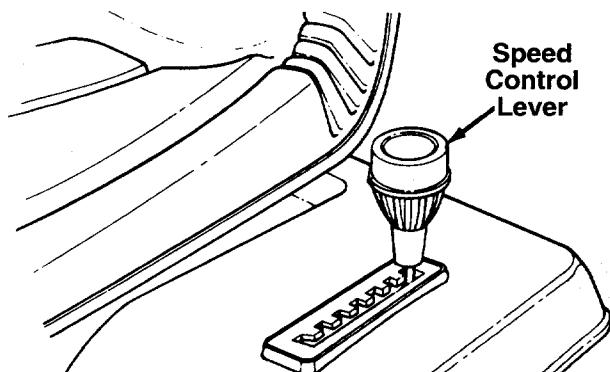


FIGURE 13.

## LIFT LEVER

The five position lift lever is used to change the operating position of the attachments. To operate, pull the lever towards you. To release, move the lever to the right and then forward. See figure 11.

## POWER TAKE-OFF (PTO) LEVER

The PTO lever is located on the right side of the dash-

board. The PTO lever is used to engage and disengage the power to the attachments. To engage the PTO, lift the lever slowly and lock it into the notch. See figure 11.

**NOTE:** The PTO lever **must** be in the disengaged position (down) when starting the engine when shifting into reverse and if the operator leaves the seat.

# OPERATION



## WARNING

### AVOID SERIOUS INJURY OR DEATH

- GO UP AND DOWN SLOPES, NOT ACROSS. • AVOID SUDDEN TURNS.
- DO NOT OPERATE THE UNIT WHERE IT COULD SLIP OR TIP.
- IF MACHINE STOPS GOING UPHILL, STOP BLADE(S) AND BACK DOWNHILL SLOWLY.
- DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
- NEVER CARRY CHILDREN.
- LOOK DOWN AND BEHIND BEFORE AND WHILE BACKING.
- KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
- REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADE(S).
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
- BE SURE BLADE(S) AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE(S).
- BEFORE LEAVING OPERATOR'S POSITION, DISENGAGE BLADE(S), PLACE THE SHIFT LEVER IN NEUTRAL, ENGAGE BRAKE LOCK, SHUT ENGINE OFF AND REMOVE KEY.

READ OPERATOR'S MANUAL

## GAS AND OIL FILL-UP

Check oil level and add if necessary. Service the engine with gasoline as instructed in the separate engine manual packed with your tractor. Read instructions carefully.

**IMPORTANT:** Your tractor is shipped with oil; however, you must check the oil level before operating. Be careful not to overfill.

The gasoline tank is located under the seat. The filler neck is behind the seat. Do not overfill.



**WARNING:** Never fill fuel tank indoors, with engine running or while engine is hot.

## STARTING THE ENGINE

**IMPORTANT:** This unit is equipped with a **safety interlock system** for your protection. The purpose of the safety interlock system is to prevent the engine from cranking or starting unless the clutch-brake pedal is depressed and the PTO lever is in the disengaged position. In addition, the PTO lever must be in the disengaged position when the unit is put into reverse or the engine will shut off. If the operator leaves the seat with the PTO lever engaged and/or without setting the parking brake, the engine will shut off.



**WARNING:** Do not operate the tractor if the interlock system is malfunctioning because it is a safety device, designed for protection.

1. Place the PTO lever in the disengaged (down) position.
2. Depress the clutch-brake pedal and set the parking brake.
3. Place the shift lever in the NEUTRAL position.
4. Set the throttle control in the FAST position.
5. Pull out the choke control (a warm engine may not require choking).
6. Turn the ignition key to the right to the START position. After the engine starts, release the key. It will return to the ON position.
7. Slowly push in the choke as the engine warms up.

## STOPPING THE ENGINE

Turn the ignition key to the left to the OFF position. Remove the key to prevent accidental starting.

**IMPORTANT:** If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the unit for any damage, and repair the damage before restarting and operating the mower.

**NOTE:** If any problems are encountered, refer to the Trouble Shooting Guide on page 18.

## OPERATING THE TRACTOR

1. Start the engine as instructed previously.
2. Move throttle control to 3/4 or full throttle to prevent strain on the engine and to operate attachments.
3. Place the shift lever in one of the two forward positions (LOW or HIGH), or in REVERSE. Place the speed control lever in desired position. Use first speed position when operating the tractor for the first time.



**WARNING:** Look to the rear before backing up.

4. Release the parking brake by depressing the clutch-brake pedal. Release clutch-brake pedal slowly to put unit into motion.
5. The tractor is brought to a stop by depressing the clutch-brake pedal.
6. The cutting blades (or other attachment) may be engaged while the tractor is moving or standing still. DO NOT engage the cutting blades abruptly as the sudden belt tension on the pulley may cause the engine to stall.



**WARNING: Keep feet and hands away from the discharge opening, the blades or any part of the deck.**

**NOTE:** When operating the unit initially, there will be little difference between the highest two speeds until after the belts have seated themselves into the pulleys during the break-in period. Be certain to change oil in the crankcase after the first 5 hours of operation.

Be sure that the lawn is clear of stones, sticks, wire, or other objects which could damage tractor or engine. For best results and to insure more even grass distribution, do not mow when lawn is excessively wet.



**WARNING: Before leaving the operator's position for any reason, disengage the blades, place the shift lever in neutral, engage the parking brake, shut engine off and remove the key.**

When stopping the unit to empty a grass bag, etc., follow the instructions above. This procedure will also eliminate "browning" the grass, which is caused by hot exhaust gases from a running engine.

If unit stalls with speed control in sixth or seventh speed, or if unit will not operate with speed control lever in first or second speed position, proceed as follows.

1. Place shift lever in NEUTRAL.
2. Restart engine.
3. Place speed control lever in seventh speed position.
4. Release clutch-brake pedal fully.
5. Depress clutch-brake pedal.
6. Place speed control lever in desired position.
7. Place shift lever in one of the forward positions (HIGH or LOW) or REVERSE, and follow normal operating procedures.

### **HIGH-LOW TRANSMISSION RANGES**

HIGH range position is for normal load conditions, such as mowing or transporting.

LOW range position is for situations which require more torque when the tractor is used under high load conditions, such as tilling, snow removal or hauling heavy loads.

GRASS COLLECTOR Model 190-083 is available as optional equipment for tractors with 46" mowing decks.



**WARNING: The mower should not be operated without the entire grass catcher or chute deflector in place.**

**NOTE:** Under normal usage bag material is subject to wear, and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations.

For replacement bags, use only factory authorized replacement bag.

## **ADJUSTMENTS**



**WARNING: Disconnect the spark plug wire and ground against the engine before performing any adjustments, repairs or maintenance.**

### **SEAT ADJUSTMENT**

To adjust the position of the seat, loosen the four self-tapping screws on the bottom of the seat. See figure 1. Slide the seat forward or backward as desired. Retighten the self-tapping screws.

### **SPEED CONTROL ADJUSTMENT (See figure 14)**

**NOTE:** When operating the unit initially or after replacing the belts, there will be little difference between the sixth and seventh speeds until after the belts have gone through a break-in period and have seated themselves into the pulleys.

If speed control adjustment is needed, adjust the speed control links as follows. (A 1/2" shim or suitable spacer is required.)

1. Start the engine.
2. Place the shift lever in NEUTRAL position.
3. Place the speed control lever in seventh speed position.
4. Release the clutch-brake pedal completely, then slowly depress the pedal all the way (to park position). Hold the pedal in this position.
5. Turn the engine off.
6. After engine stops completely, release the clutch-brake pedal.
7. Disconnect the rear speed control link from the variable speed torque bracket by removing the cotter pin and flat washer.
8. Place the speed control lever in the first position.
9. Disconnect the front speed control link from the variable speed torque bracket by removing the cotter pin and flat washer.

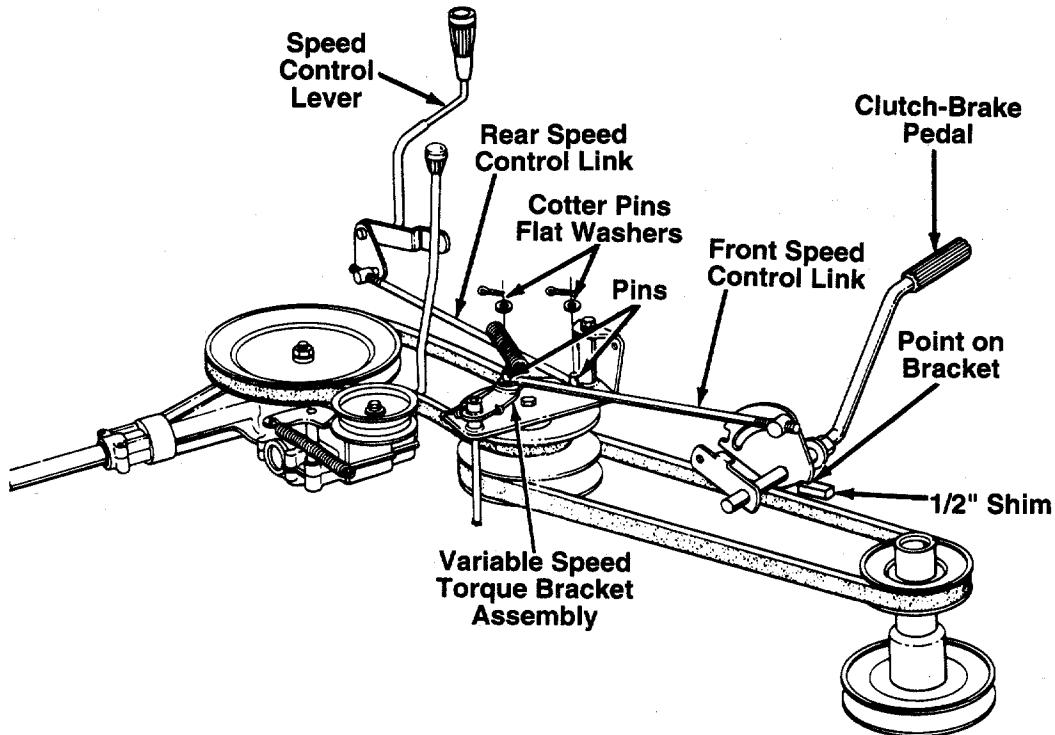


FIGURE 14.

10. Place a 1/2" shim or other suitable object under the point on the bracket on the clutch-brake pedal as shown.
11. Thread the front speed control link in or out of the ferrule until the hole in the link lines up with the pin on the variable speed torque bracket. Secure with the flat washer and cotter pin removed in step 9.
12. Push the rear speed control link backward using light pressure, and hold it in this position as you thread it into or out of the ferrule until the hole in the link lines up with the pin on the variable speed torque bracket. Then turn the link clockwise two more times (making it longer).
13. Move the speed selector toward the right so the hole in the rear speed control link fits over the pin on the variable speed torque bracket. Secure with the flat washer and cotter pin removed in step 7.
14. Remove the 1/2" shim from beneath the bracket on the clutch-brake pedal.

#### LEVELING THE DECK

1. Check tire pressure in all four tires. Recommended pressure is approximately 12 p.s.i.
2. Make certain all deck wheels are mounted in same relative location.
3. On a level surface, engage the PTO and lower the deck until it reaches the ground.

All four deck wheels should reach the ground at the same time. If they do not, adjust the deck links as necessary.

**NOTE:** When adjusting the deck links, disengage the PTO. Remove the hairpin clip and washer from the weld bolt. Thread eyebolt up or down the link as necessary, and reassemble.

4. Raise the deck 1/2" to 1" above the ground. Check to be certain the distance from the bottom edge of the deck to the ground is the same on both sides of the deck. If it is not, adjust the links on the left side of the unit. Check to be certain the front of the deck is 1/4" to 3/8" lower than the rear of the deck. If it is not, adjust the two front links to obtain this distance.

#### STEERING WHEEL ADJUSTMENT

There are four height positions for the steering wheel. To adjust the height of the steering wheel, remove the hex bolt and hex lock nut on the steering shaft. Place the steering wheel in the position desired and secure with hex bolt and hex lock nut. Refer to figure 4.

**NOTE:** When raising the height of the steering wheel, stretch the steering bellow to cover the steering shaft.

The steering shaft may also be adjusted if there is too much play between the steering gear and segment. To adjust, loosen the hex bolt and nut on the front of the bearing retainer bracket. See figure 15. Pry the bearing retainer bracket toward the right until the steering gear engages solidly into the teeth of the steering segment. Retighten the hex bolt and nut.

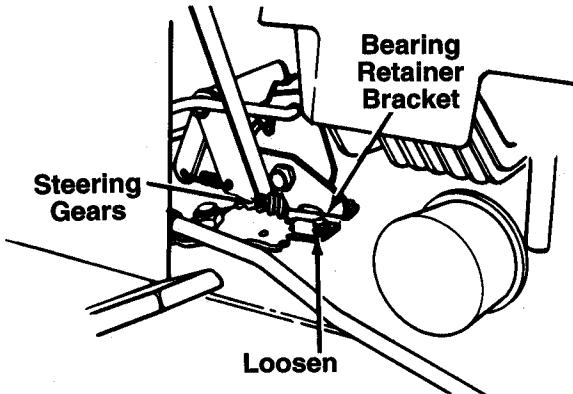


FIGURE 15.

### BRAKE ADJUSTMENT (See figure 16)

The brake is located on the left side of the transaxle. During normal operation of this machine, the brakes are subject to wear and will require periodic examination and adjustment.

**WARNING: Do not adjust the brake while the engine is running. Be sure to block the wheels of the tractor before making the brake adjustment.**

To adjust the brake, remove the cotter pin. Adjust the castle nut so the brake starts to engage when the brake lever is 1/4" to 5/16" away from the axle housing.

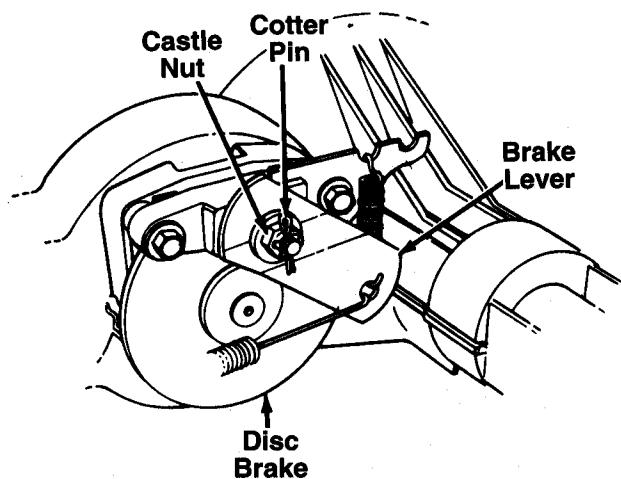


FIGURE 16.

### CARBURETOR ADJUSTMENTS

**WARNING: If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.**

Minor carburetor adjustments may be required to compensate for differences in fuel, temperature, altitude and load. Refer to separate engine manual for carburetor adjustment information.

**NOTE: A dirty air cleaner will cause an engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor.**

## LUBRICATION

**WARNING: Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on lawn tractor.**

### STEERING GEARS

Lubricate teeth of steering gears with automotive multi-purpose grease after every 25 hours of operation or once a season. Refer to figure 15.

### STEERING SHAFT

Lubricate steering shaft at least once a season with light oil.

### TRANSAXLE

The transaxle is lubricated and sealed at the factory and does not require checking. If disassembled for any reason, lubricate with 32 oz. of Shell Darina grease, part number 737-0148 (16 oz. tube).

### LINKAGE

Once a season lubricate all the pivot points on the clutch, brake and lift linkage with SAE 30 engine oil.

### WHEELS

The front wheels may be provided with grease fittings. The rear wheels must be removed from the axle for lubrication. Lubricate at least once a season with automotive multi-purpose grease.

### PIVOT POINTS

Lubricate all pivot points with light oil at least once a season.

### BALL JOINTS

The ball joints and drag link ends are permanently lubricated.

## MAINTENANCE

**WARNING: Disconnect the spark plug wire and ground against the engine before performing any adjustments, repairs or maintenance.**

### TROUBLE SHOOTING

Refer to the chart on page 18 for trouble shooting information.

## ENGINE OIL

Check the oil level in the crankcase before each use of the machine and after every two hours of operation. Oil level should be maintained as instructed in the separate engine manual.

After the first two hours of operating a new engine, drain the oil from the oil drain pipe at the bottom of the crankcase while engine is still hot and refill crankcase with new oil; thereafter change the oil after every 25 hours of operation.

**Refer to separate engine manual for all detailed instructions engine maintenance procedures.**

## FUEL FILTER

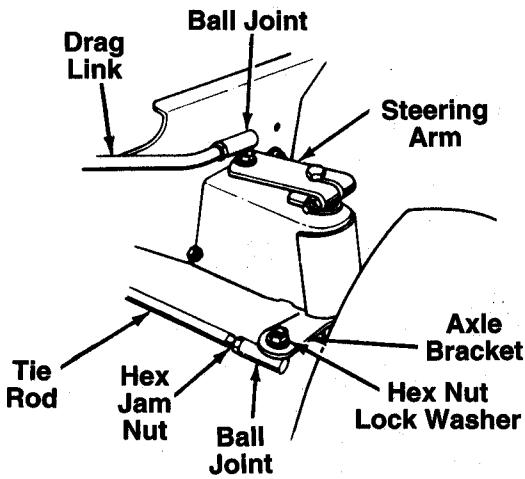
Your unit is equipped with a replaceable in-line fuel filter. Replace filter whenever contamination or discoloration is noticed. Order replacement filter through your authorized engine service dealer.

## WHEEL ADJUSTMENT

The caster (forward slant of the king pin) and the camber (tilt of the wheels out at the top) require no adjustment. Automotive steering principles have been used to determine the caster and camber on the tractor. The front wheels should toe-in 1/8 inch.

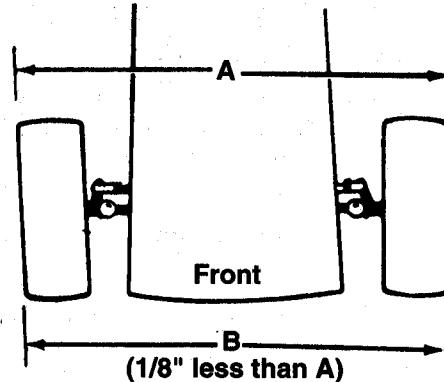
Some units have adjustable tie rods so the toe-in can be adjusted. To adjust the toe-in on these units, follow these steps.

1. Remove the hex nut and lock washer, and drop the end of the tie rod from the axle bracket. See figure 17.
2. Loosen the hex jam nut on tie rod.
3. Adjust the tie rod assembly for correct toe-in.



**FIGURE 17.—Units with adjustable tie rods**

Dimension "B" should be approximately 1/8" less than Dimension "A." See figure 18. To increase Dimension "B," screw tie rod into tie rod end. To decrease Dimension "B," unscrew tie rod from tie rod end. Reassemble tie rod. Check dimensions. Readjust if necessary.



**FIGURE 18.—Units with adjustable tie rods**

## DRAG LINK

If the drag link or ball joints are changed, the new assembly must be adjusted to the exact same length as the original. If adjusted incorrectly, it will allow the tractor to turn sharper one direction than the other.

To take off the drag link, remove the nuts and lock washers holding the ball joint to the steering gear and right front axle bracket. See figure 17.

## BATTERY CARE AND MAINTENANCE

### CHECK FLUID LEVEL

Check fluid level inside each cell of the battery every two weeks and before and after charging. Always keep level between the LOWER LEVEL and UPPER LEVEL lines on battery.

**Add only distilled water.** Never add additional acid or any other chemicals to the battery after initial activation.

**NOTE:** *After operating the lawn tractor for a long period of time, check the fluid level in the battery as it can overheat and lose fluid.*

### CHARGING THE BATTERY

The engine is equipped with an alternator which charges battery when tractor is operated. Under normal conditions, the battery only needs to be charged before, during and after off-season storage. Follow the instructions under "Off-Season Storage."

**To charge the battery:** Make certain fluid level in each cell is between LOWER LEVEL and UPPER LEVEL. Use a 12 volt automotive charger which is rated less than 10 amps. Charge for a minimum of 3 hours and a maximum of 5 hours.

## REMOVING / INSTALLING / JUMP STARTING



**WARNING:** When removing or installing the battery, follow these instructions to prevent the screwdriver from shorting against the frame.

**Removing the Battery:** Disconnect negative cable first, then positive cable.

**Installing the Battery:** Connect positive cable first, then negative cable.

### Jump Starting

1. First, connect end of one jumper cable to the positive terminal of the good battery, then the other end to the positive terminal of the dead battery.
2. Connect the other jumper cable to the negative terminal of the good battery, then to the FRAME OF THE UNIT WITH THE DEAD BATTERY.



**WARNING:** Failure to use this procedure could cause sparking, and the gas in either battery could explode.

## CLEAN THE BATTERY

Clean the battery by removing it from the unit and washing with a baking soda and water solution. If necessary, scrape the battery terminals with a wire brush to remove deposits. Coat terminals and exposed wiring with grease or petroleum jelly to prevent corrosion.

## BATTERY FAILURES

Some common causes for battery failure are: incorrect initial activation, lack of water, adding chemicals other than water after initial activation, undercharging, overcharging, corroded connections, freezing. **These failures do not constitute warranty.**

## TIRES

Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure). Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

When installing a tire to the rim, be certain rim is clean and free of rust. Lubricate both the tire and rim generously. Never inflate to over 30 p.s.i. to seat beads.



**WARNING:** Excessive pressure (over 30 p.s.i.) when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

## BELT REPLACEMENT

### Front Drive Belt

1. Depress the clutch pedal and set parking brake.
2. Remove the deck from the tractor.
3. Raise and block the front wheels of the tractor so you can work under it.
4. Remove the four self-tapping screws which hold the belt keeper assembly to the frame at the engine pulley. Push the belt keeper assembly forward, out of the way. See figure 19.

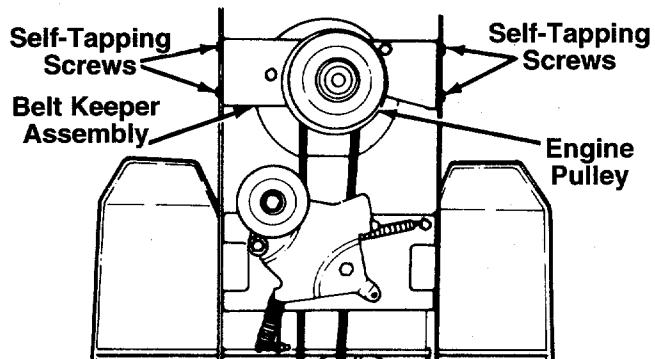


FIGURE 19.

5. Remove the two pins which act as belt keepers by the variable speed pulley. See figure 20.
6. Roll the belt off the variable speed pulley, then remove from the engine pulley.
7. Reassemble the new belt, following instructions in reverse order.

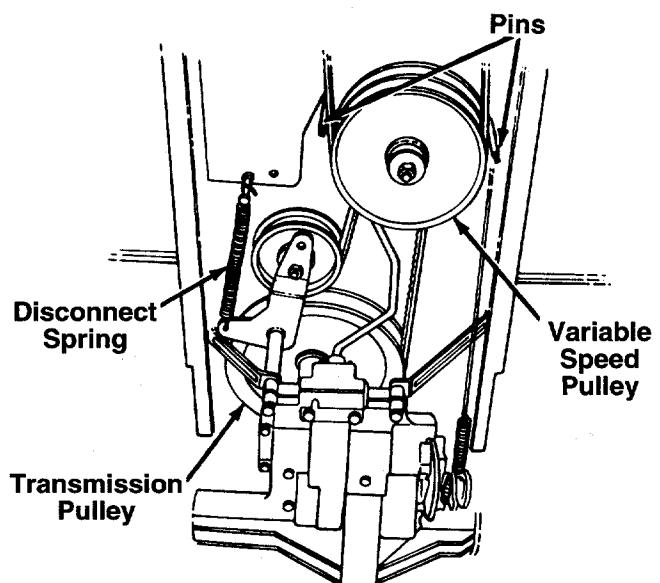


FIGURE 20.

### Rear Drive Belt

1. First remove the front drive belt as instructed in the previous section.

2. Disconnect the spring which secures the idler pulley to the frame.
3. Remove the transmission cover by unscrewing the two knobs, and removing two truss machine screws.
4. Roll the belt over the top of the transmission pulley. Remove belt from the variable speed pulley.
5. Reassemble the new belt, following instructions in reverse order.

## OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, prepare for storage as follows.

1. Clean the engine and the entire unit thoroughly.
2. Lubricate all lubrication points. Wipe the entire machine with an oiled rag to protect the surfaces.

3. Refer to the engine manual for correct engine storage instructions. The engine must be completely drained of fuel and a fuel stabilizer used to prevent gum deposits from forming on essential carburetor parts, fuel lines and fuel tanks.
4. **Charge battery fully.** The battery loses some of its charge each day when the unit is not used. NEVER store battery without a full charge. Recharge battery before returning to service or every two months, whichever occurs first.
5. Store unit in a clean, dry area. Do not store next to corrosive materials, such as fertilizer.

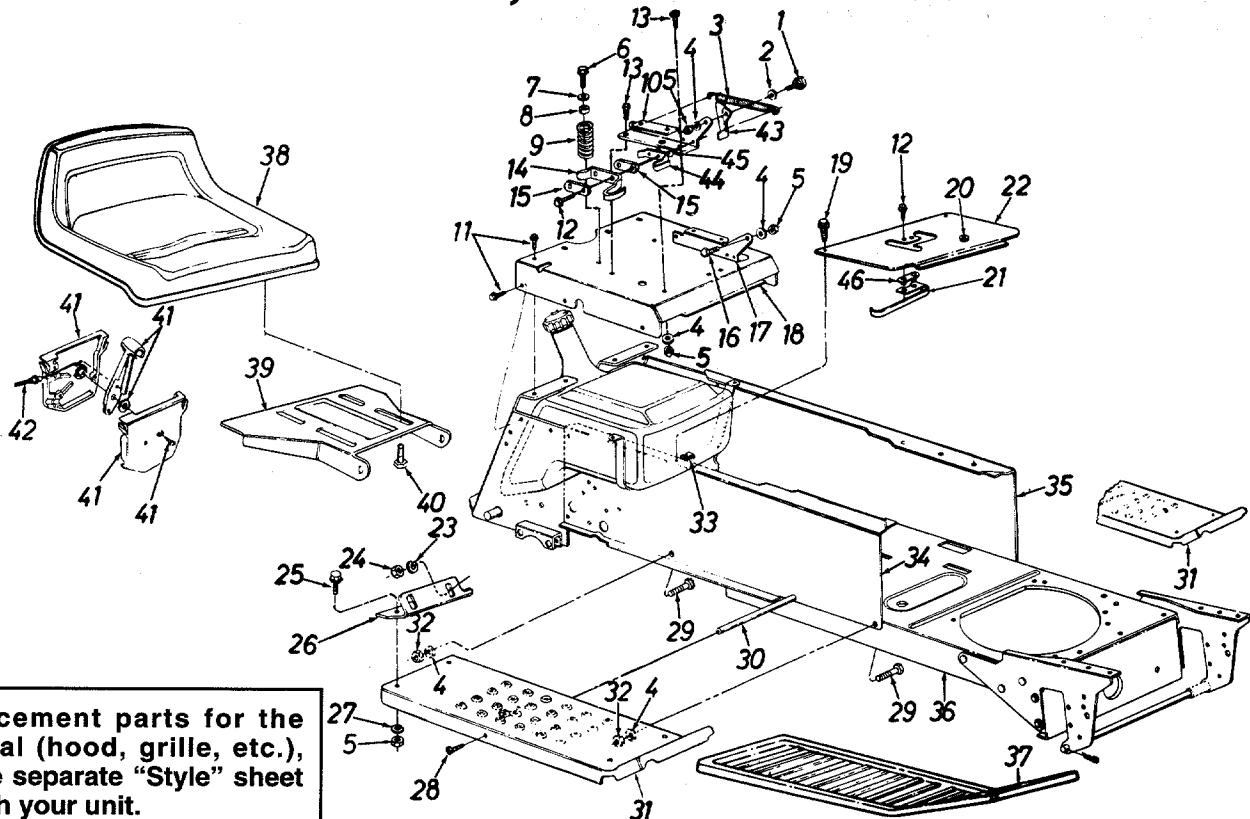
**NOTE:** *When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.*

# TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Engine will not crank	Battery installed incorrectly	The battery must be installed with negative terminal attached to black ground wire. Negative terminal is identified at the post by "NEG", "N" or "-". The positive terminal, identified by "POS", "P" or "+", must be attached to the big red wire which goes to the solenoid.
	Battery is dead or weak	Check fluid level in battery. If fluid is low, fill to UPPER LEVEL line with water. Charge with taper charger until fully charged.
	Blown fuse or circuit breaker	Replace fuse with 7-1/2 amp. automotive type fuse. Fuses seldom fail without a reason. The problem must be corrected. Check for loose connections in the fuse holder. Replace fuse holder if necessary. A dead short may be in the cranking or charging circuit where the insulation may have rubbed through and exposed the bare wire. Replace the wire or repair with electrician's tape if the wire strands have not been damaged. Note: Look for a wire pinched between body panels, burned by the exhaust pipe or muffler or rubbed against a moving part.
	Engine ground wire loose	Engine should have a black ground wire running from engine to frame or mounting bolt.
	Safety switch button not depressed	There are two switches in the starting circuit of your unit: the clutch pedal switch and the deck lift lever switch. Make certain the actuator is fully depressing the buttons on each switch.
Engine cranks but will not start	Throttle or choke not in starting position	Check owner's guide for correct position for throttle control and choke for starting.
	No spark to spark plug	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have engine repaired at authorized engine service dealer. Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground the spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.
	No fuel to the carburetor	Gasoline tank empty. Fill. Fuel line or inline fuel filter plugged. Remove and clean fuel line. Replace filter if necessary.
	Air filter dirty	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.
Engine smokes	Engine loses crankcase vacuum	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.
Excessive vibration	Bent or damaged blade spindle	<b>Stop engine immediately.</b> Check all pulleys, blade adapters, keys and bolts for tightness and damage. Tighten or replace any damaged parts.
	Bent blade	<b>Stop engine immediately.</b> Replace damaged blade. Only use original equipment blades.
Mower will not discharge grass or leaves uncut strips	Engine speed low Speed selection Blades short or dull	Throttle must be set at full throttle. Use lower ground speed. The slower your ground speed, the better the quality of cut. Sharpen or replace blades (uncut strip problem only).

If the above steps fail to correct the problem, take the unit to your local authorized service dealer for repair.

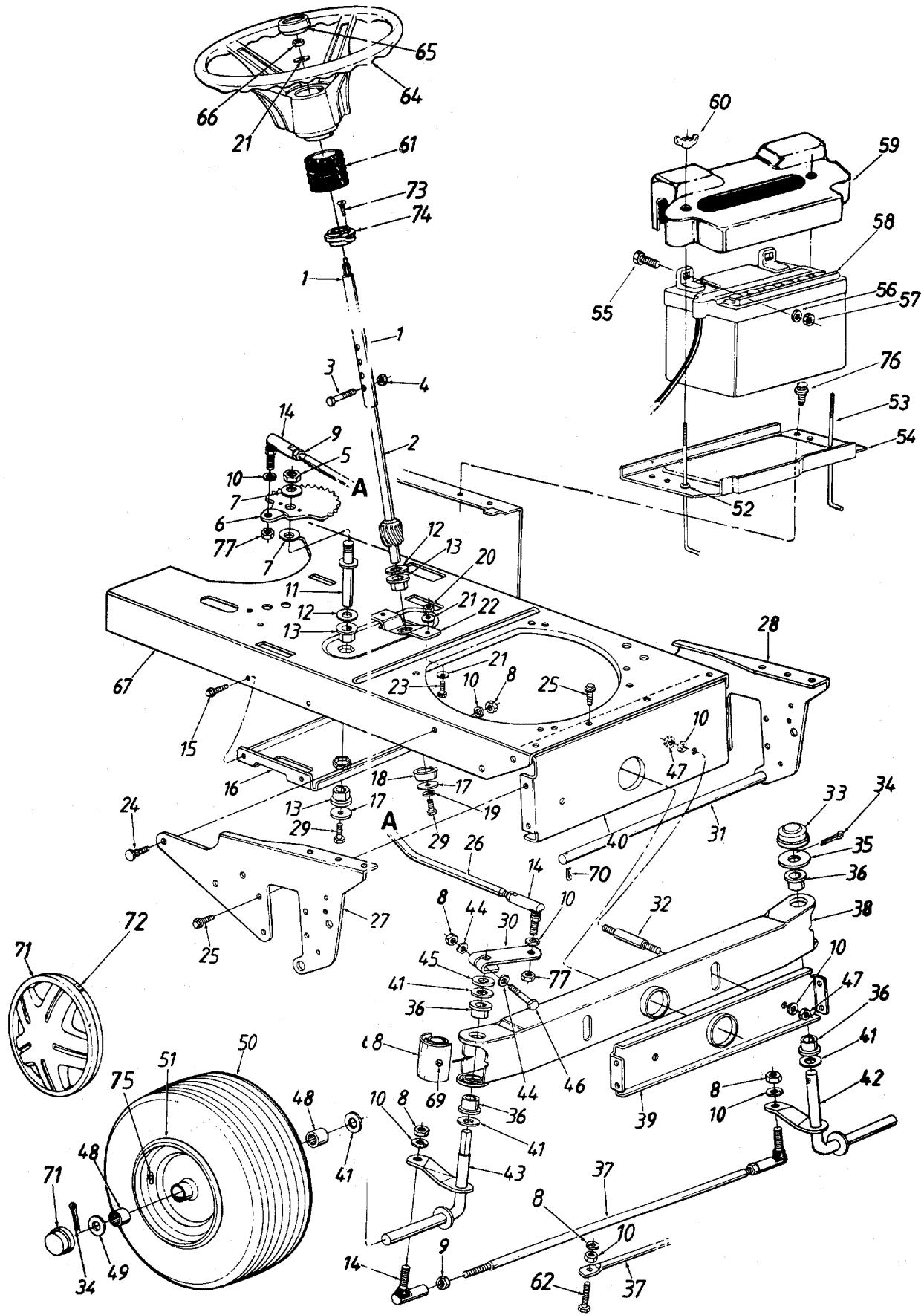
# Models 820 thru 829; 840 thru 849



## PARTS LIST FOR 800 SERIES GARDEN TRACTORS

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	738-0296		Shld. Bolt .437" Dia. x .162"	26	15846		Fender Bracket—R.H.
2	736-0141		Spr. Wash. .445" I.D.	27	15847		Fender Bracket—L.H.
3	732-0581B	N	Ext. Spring 5.31" Lg.	28	17406		Fender Bracket—R.H. (Style 4, 6, 9)
4	736-0119		L-Wash. 5/16" I.D.*	29	17407		Fender Bracket—L.H. (Style 4, 6, 9)
5	712-0267		Hex Nut 5/16-18 Thd.*	30	736-0242		Bell-Wash. .345" I.D. x .88" O.D.
6	710-0601		Hex Wash. Hd. Tap Scr. 5/16-18 x .7" Lg.	31	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.
7	736-0159		Fl-Wash. .344" I.D.	32	710-1012		Rib Neck Bolt 5/16-24 x .75" Lg.
8	722-0160		Bushing	33	738-0435		Running Board Rod
9	732-0588		Compression Spring	34	16922		Running Board—R.H.
10	17702		Seat Pivot Brkt. Support—R.H.	35	16921		Running Board—L.H.
11	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16 x .75" Lg.	36	712-0123		Hex Nut 5/16-24 Thd.
12	710-0227		Hex Wash. Hd. AB-Tap Scr. #8 x .5" Lg.	37	726-0139		Speed Nut #10Z
13	710-1228		Torx Hd. AB-Tap Scr. 5/16-18 x .75" Lg.	38	17360A	N	R.H. Side Frame
14	725-1303		Spring Switch	39	17361B	N	L.H. Side Frame
15	726-0279		Insulator Plate	40	17359B	N	Lower Frame
16	738-0155		Shld. Bolt .437" Dia. x .162"	41	731-1052		Rubber Foot Pad (Optional)
17	17701		Seat Pivot Brkt. Support—L.H.	42	757-0345		Seat 8-7/8" High
18	16848C		Seat Plate	43	757-0350		Seat 14-1/4" High
19	710-0351	N	Truss Mach. B-Tap Scr. #10 x .5" Lg.	44	757-0338		Seat 10-5/8" High
20	731-0405		Snap Bushing	45	15607D		Seat Pivot Bracket
21	725-1643	N	Reverse Safety Switch	46	710-0623		Hex Tap Scr. 3/8-16 x .75" Lg.
22	—		Shift Cover (Refer to Style Sheet)	47	831-0823A		Throttle Control Box Ass'y.
23	736-0329		L-Wash. 1/4" I.D.*	48	746-0634		Throttle Control Wire 35" Lg.
24	712-0287		Hex Nut 1/4-20	49	17239A		Seat Lift Bracket
25	710-0118		Hex Bolt 5/16-18 x .75" Lg.	50	725-1439		Seat Spring Switch
				51	726-0278		Insulator Boss Plate
				52	726-0320		Insulator Nut Plate

# Models 820 thru 829; 840 thru 849



# Models 820 thru 829; 840 thru 849

## PARTS LIST FOR 800 SERIES GARDEN TRACTORS

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	16512		Steering Column Ass'y.	41	736-0188		Fl-Wash. .76" I.D. x 1.49" O.D.
2	738-0763		Lower Steering Shaft	42	16915		Front Axle Ass'y.—L.H.
3	710-0958		Hex Bolt 1/4-20 x 1.31" Lg.	43	16914		Front Axle Ass'y.—R.H.
4	712-0324		Hex L-Nut 1/4-20 Thd.	44	736-0286		Bowed Washer
5	712-0318		Hex Jam Nut 5/8-18 Thd.*	45	748-0160		Spacer .755" I.D. x 1.25" O.D.
6	717-0943A		Steering Gear Segment	46	710-0331		Hex Bolt 3/8-24 x 2.25" Lg.
7	736-0317		Bell-Wash. 5/8" I.D. x 1.25" O.D.	47	712-0798		Hex Nut 3/8-16 Thd.*
8	712-0241		Hex Nut 3/8-24 Thd.	48	**		Bearing
9	712-0711		Hex Jam Nut 3/8-24 Thd.	49	736-0316		Fl-Wash. .71" I.D. x 1.5" O.D.
10	736-0169		L-Wash. 3/8" I.D.*	50	**		Wheel Ass'y. Comp.
11	738-0768		Steering Gear Segment Shaft	51	**		Tire Only
12	736-0187		Fl-Wash. .64" I.D. x 1.24" O.D.	52	726-0271		Rim Only
13	748-0227A		Hex Flange Brg. .63" I.D.	53	711-0222		Push Nut
14	723-3018		Ball Joint Ass'y.	54	17635		Battery Hold Down Rod
15	710-0599		Hex Wash. Hd. TT-Tap Scr. 1/4-20 x .5" Lg.		17634		Battery Plate
16	16888		Deck Idler Support Brkt.	55	710-0258		Battery Plate (820 & 840 Only)
17	736-0343		Fl-Wash. .33" I.D. x 1.25" O.D.	56	736-0329		Hex Bolt 1/4-20 x .62" Lg.*
18	750-0532		Spacer .985" I.D. x 1.25" O.D.	57	712-0287		L-Wash. 1/4" I.D.*
19	736-0119		L-Wash. 5/16" I.D.*	58	725-1635		Hex Nut 1/4-20 Thd.*
20	712-0123		Hex Nut 5/16-24 Thd.*	59	731-1132		Battery (275 Cold Crank Amps)
21	736-0242		Bell-Wash. .345" I.D. x .88" O.D.	60	712-0113		Battery Cover
22	16894		Bearing Retainer Brkt.	61	731-0954		Wing Nut Plastic 1/4-20 Thd.
23	710-0157		Hex Bolt 5/16-24 x .75" Lg.	62	731-0559		Steering Bellow (Style 0, 4, 6, 9)
24	710-0793		Ribbed Neck Bolt 3/8-24 x .8" Lg.	63	710-0459		Steering Bellow (Style 2, 3, 8)
25	710-0604		Hex Wash. TT-Tap Scr. 5/16-18 x .62" Lg.	64	731-0805		Hex Bolt 3/8-24 x 1.5" Lg. (Gr. 5)
26	747-0579		Steering Drag Link	65	731-0220		Steering Wheel (3 Spoke)
27	16896		Pivot Bar Side Plate—R.H.	66	712-0237		Steering Wheel (4 Spoke)
28	16897		Pivot Bar Side Plate—L.H.	67	17359B		Steering Wheel Cap
29	710-0538		Hex Bolt 5/16-18 x .62" Lg.	68	731-1049		Hex L-Nut 5/16-24 Thd.
30	16918		Steering Arm	69	737-0280		Lower Frame
31	738-0777		Deck Connecting Rod	70	714-0149B		Pivot Bar End Capt
32	738-0775		Pivot Bar Shld. Bolt 3/8-16 x 5/8" Lg.	71	731-0484A		Grease Fitting†
33	731-0484A		Cap	72	727-0425A		Internal Cotter Pin
34	714-0121		Cotter Pin 5/32" Dia.	73	710-0837		Hub Cap
35	736-0316		Flat Washer				Hub Cap (5 Spoke)†
36	741-0523		Flange Brg. .757" I.D.				Spring Clip†
37	747-0721		Tie Rod 20.25" Lg. (Adjustable)	74	741-0356		Oval Hd. Cr.-Sunk Scr. #10 x 5/8" Lg. (Not Used on Styles 0, 4, 6, 9)
	747-0862		Tie Rod 21.83" Lg. (Non-Adjustable)				Flange Brg. .89" I.D. x 1.36" O.D. (Not Used on Styles 0, 4, 6, 9)
38	16843		Pivot Bar Assy.	75	**		Air Valve
39	16889		Pivot Bar Support Brkt.—Front	76	710-0776A		Hex AB-Tap Scr. 1/4 x .62" Lg.
40	16890		Pivot Bar Support Brkt.—Rear	77	712-0446		Hex Jam L-Nut 3/8-24 Thd.

†Optional Parts

\*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.



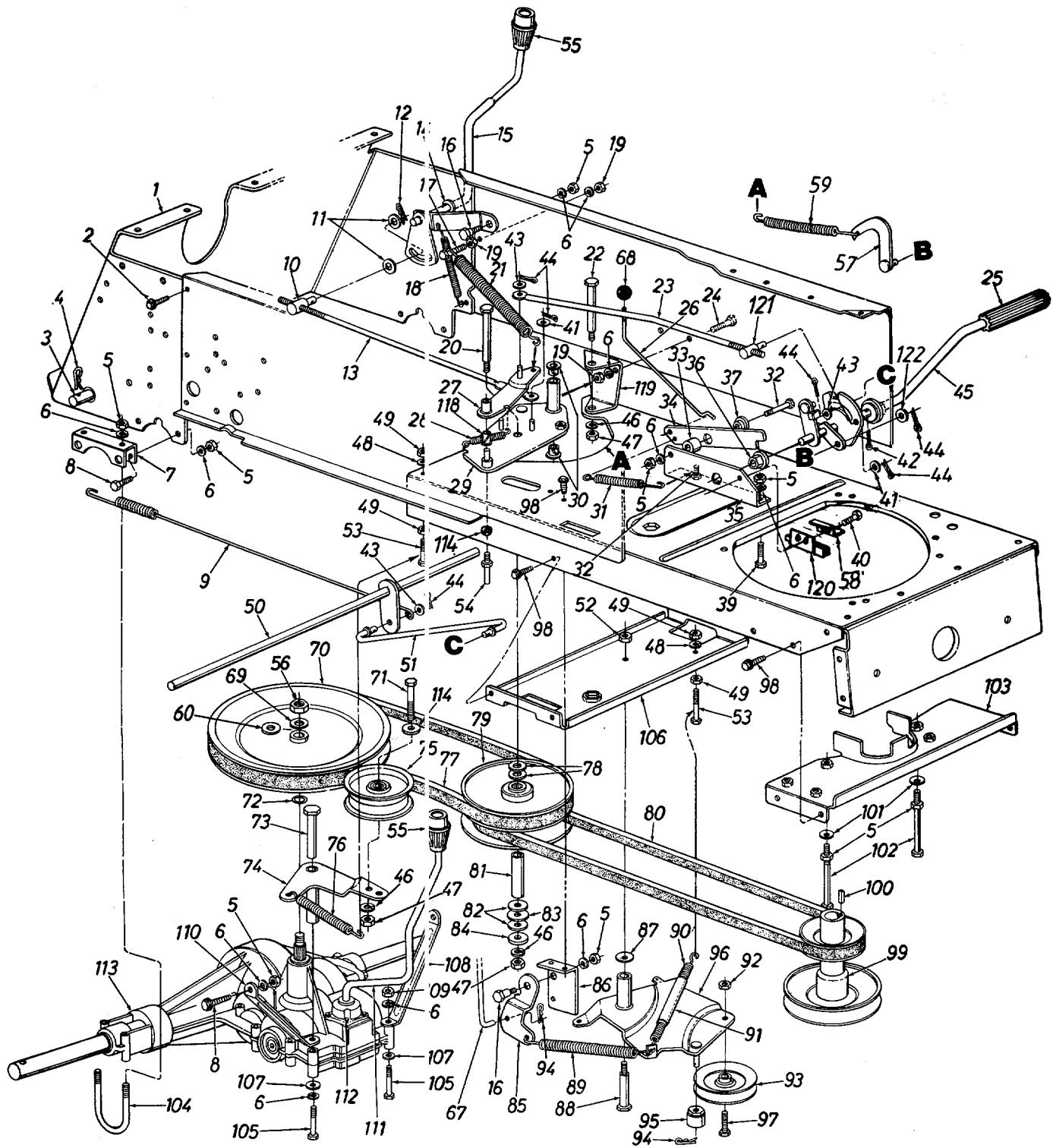
This instruction manual covers various models, and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

### \*\*FRONT WHEEL CHART

Description	16" x 6.5" w/Plastic Bearing	16" x 6.5" w/Ball Bearing
Wheel Ass'y. Comp.	734-1500A	734-1722
Tire Only	734-0275	734-0275
Rim Only	734-1501A	734-1688
Bearing	741-0516	741-3032
Air Valve	734-0255	734-0255
Grease Fitting	737-0280	737-0280

Note: If brand of tire is important, order by part number and description (description is printed on the sidewall of tire) [i.e. Armstrong Super Turf, Goodyear Softrac, Carlisle Turf Saver, etc.].

# **Models 820 thru 829; 840 thru 849**



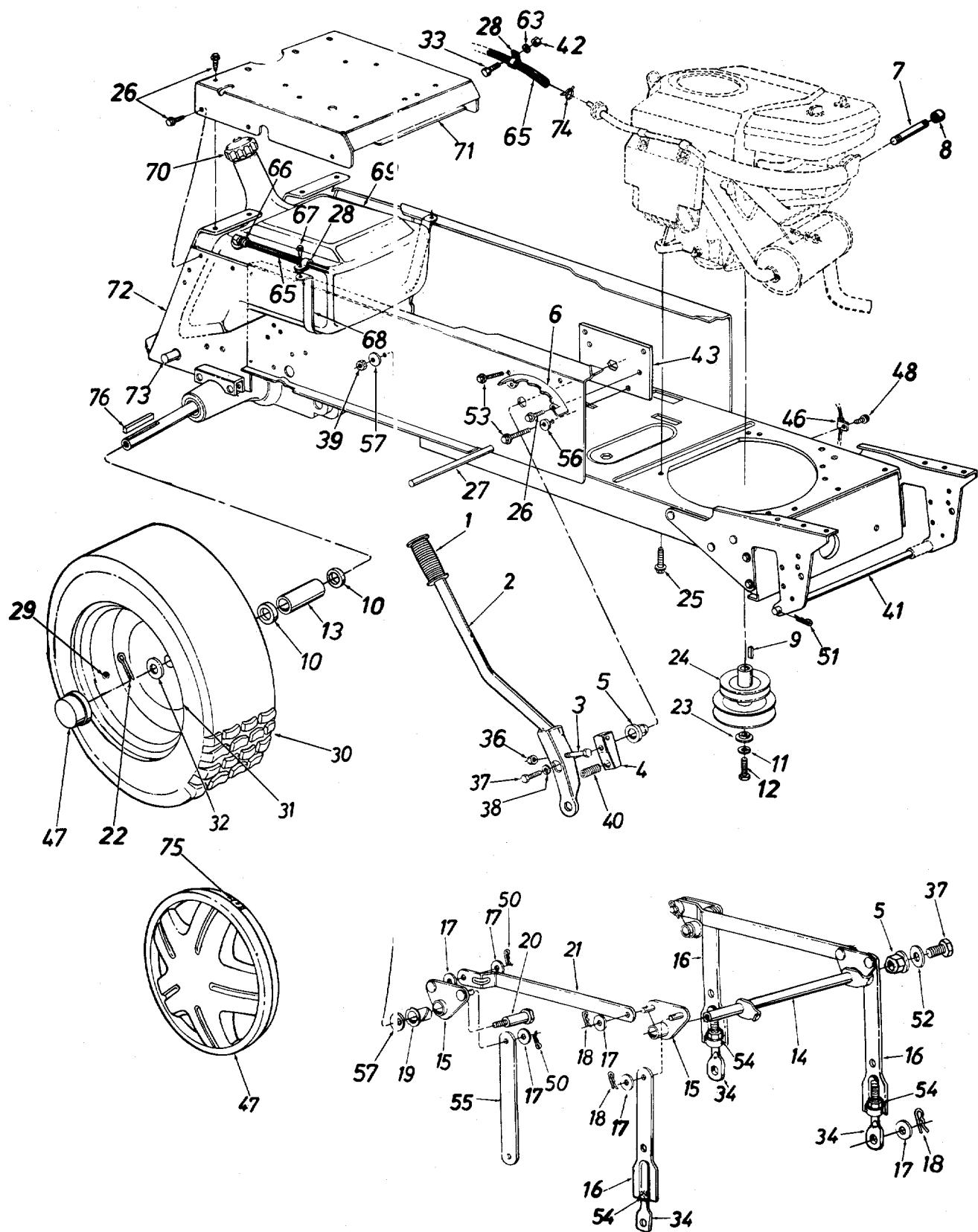
# Models 820 thru 829; 840 thru 849

## PARTS LIST FOR 800 SERIES GARDEN TRACTORS

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	17343		Hitch Plate	58	17962		Switch Plate
2	710-0726		Hex AB-Tap Scr. 5/16" x .75"	59	732-0698		Ext. Spring 5.2" Lg.
3	738-0482		Hitch Rod	60	736-0156		Fl-Wash. .635" I.D. x 1.12" O.D.
4	714-0147		Hitch Pin Clip	67	—		Deck Control Rod (Refer to Style Sheet)
5	712-0267		Hex Nut 5/16-18 Thd.*	68	720-0166		Ball Knob Brake
6	736-0119		L-Wash. 5/16" I.D.*	69	736-0427		Bell-Wash. 9/16" I.D. x 1.25"
7	17340		Transaxle Bracket	70	756-0534		V-Pulley 91/4" O.D.
8	710-3008		Hex Bolt 5/16-18 x .75" Lg. (Gr. 5)	71	710-0539		Hex Bolt 3/8-24 x 1.75" Lg.
9	732-0601		Brake Extension Spring	72	732-0614		Wire Ring
10	711-0723A		Adjustment Ferrule 3/8-24 Thd.	73	738-0769		Shld. Bolt 5/16-24 Thd.
11	736-0267		Fl-Wash. .385" I.D. x .87"	74	16904		Idler Brkt. Ass'y.
13	747-0729		Speed Control Link (Rear)	75	756-0542		Flat Idler 3.5" O.D.
14	736-0192		Fl-Wash. .531" I.D. x .94"	76	732-0384		Extension Spring 6.12" Lg.
15	16906		Speed Selector Lever Ass'y.	77	754-0362		V-Belt
16	738-0155		Shld. Bolt .437" Dia. x .162"	78	736-0414		Teflon Washer 1.20" O.D.
17	710-0672		Hex Bolt 5/16-24 x 1.25" Lg.	79	717-0945		Variable Speed Pulley 6" Dia.
18	732-0429A		Extension Spring 3.9" Lg.	80	754-0358		V-Belt
19	712-3057		Hex Nut 5/16-24 Thd. (Gr. 5)	81	738-0778		Pivot Bushing
20	710-0620		Hex Bolt 3/8-24 x 4.5" Lg.	82	736-0355		Fl-Wash. .56" I.D. x 1.0" O.D.
21	732-0603		Extension Spring 11" Lg.	83	741-0405		Thrust Brg. .56" I.D. x 1.25"
22	738-0779		Shld. Bolt .625" Dia. x 3.5" Lg.	84	17485		Retainer Cup
23	747-0726		Speed Control Link (Front)	85	13887		Deck Control Pivot Brkt.
24	710-0157		Hex Bolt 5/16-24 x .75" Lg.	86	13833		Parking Brake Mtg. Brkt.
25	735-0196		Foot Pad	87	736-0105		Bell-Wash. .38" I.D. x .88" O.D.
26	747-0722		Parking Brake Link	88	738-0129		Shld. Bolt .498" Dia. x 2.05"
27	17914		Variable Speed Torque Brkt. Ass'y.	89	732-0478		Extension Spring 6.12" Lg.
28	732-0568		Extension Spring 2.59" Lg.	90	732-0308		Extension Spring 6.37" Lg.
29	17908		Pulley Plate Ass'y.	91	731-0483		Convoluted Conduit 4" Lg.
30	741-0591		Flanged Brg. .630" I.D.	92	712-0214		Hex Cent. L-Nut 3/8-24 Thd.
31	732-0395		Extension Spring 2.51" Lg.	93	756-0293A		V-Belt Idler
32	710-0528		Hex Bolt 5/16-18 x 1.25" Lg.*	94	714-0104		Internal Cotter Pin
33	750-0214		Spacer .34" I.D. x .88"	95	748-0278		Spacer
34	16980		Brake Lockout Bracket	96	14076A		Idler Brkt. Deck Ass'y.
35	16924A		Clutch Ass'y. Mtg. Bracket	97	710-0459		Hex Bolt 3/8-24 x 1.5" Lg.
36	741-0225		Hex Flange Brg. .634" I.D.	98	710-0599		Hex TT-Tap Scr. 1/4-20 x .5"
37	748-0234		Shld. Spacer .5" Dia.	99	756-0531A		Engine Pulley
38	736-0187		Fl-Wash. .64" I.D. x 1.24"	100	714-0118		Sq. Key 1/4 x 1.5" Lg.
39	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	101	736-0242		Bell-Wash. .345" I.D. x .88"
40	710-0436		Hex B-Tap Scr. #10 x 5/8 Lg.	102	710-0833		Hex Bolt 5/16-18 x 5.25" Lg.
41	736-0185		Fl-Wash. .406" I.D. x .75" O.D.	103	17358C		Belt Keeper Brkt. Ass'y.
42	714-0115		Cotter Pin 1/8" Dia.	104	711-0829		U-Bolt
43	736-0275		Fl-Wash. .34" I.D. x .68" O.D.	105	710-0593		Hex Bolt 5/16-24 x 2.25" Lg.
44	714-0111		Cotter Pin 3/32" Dia.	106	16888		Deck Idler Support Brkt.
45	17910		Foot Pedal Ass'y.	107	736-0264		Fl-Wash. .344" I.D. x .62" O.D.
46	736-0169		L-Wash. 3/8" I.D.*	108	16979		Front Trans. Support Brkt.—L.H.
47	712-0241		Hex Nut 3/8-24 Thd.	109	712-0123		Hex Nut 5/16-24 Thd.*
48	736-0329		L-Wash. 1/4" I.D.*	110	16978		Front Trans. Support Brkt.—R.H.
49	712-0287		Hex Nut 1/4-20 Thd.*	111	717-0985A		Shift Lever Ass'y. Complete
50	17349		Brake Link Bracket	112	710-1048		Socket Hd. Cap Scr. #10 x 24
51	747-0724		Front Brake Rod Link	113	618-0009		2-Speed Transmission Comp.
52	712-0375		Hex Cent. L-Nut 3/8-16 Thd.	114	736-0258		Fl-Wash. 3/8" I.D. x 1.0" O.D.
53	710-0501		Hex Bolt 1/4-20 x 2.0" Lg.	118	741-0419		Nyliner Flanged Brg.
54	711-0828		Belt Guard Pin	119	17180		Variable Speed Support Brkt.
55	720-0218		Shift Knob	120	725-3169A		Safety Switch (Clutch)
56	712-3035		Hex Jam Nut 9/16-18 Thd.	121	711-0832		Adjustment Ferrule 3/8-24 Thd.
57	17912		Foot Pedal Brkt. Ass'y.	122	736-0204		Fl-Wash. .344" I.D. x .62" O.D.

N

# **Models 820 thru 829; 840 thru 849**



# Models 820 thru 829; 840 thru 849

## PARTS LIST FOR 800 SERIES GARDEN TRACTORS

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	720-0233		Grip	34	711-0817		Eye Bolt Adj. Link 1/2-13 Thd.
2	17282		Lift Handle Ass'y.	36	712-0158		Hex Cent. L-Nut 5/16-18 Thd.
3	710-0442		Hex Bolt 5/16-18 x 1.5" Lg.*	37	710-0237		Hex Bolt 5/16-24 x .62" Lg.*
4	748-0274A		Lift Shaft Drive	38	736-0119		L-Wash. 5/16" I.D.*
5	741-0225		Plastic Hex Brg. 5/8" I.D.	39	712-0181		Hex Top L-Nut 3/8-16 Thd.
6	14231		Index Brkt. Deck Lift	40	732-0369		Compression Spring
7	737-0164		Pipe Nipple 3/8-18 Npt.	41	738-0777		Deck Connecting Rod
8	737-0143		Pipe Cap 3/8-18 Npt.	42	712-0287		Hex Nut 1/4-20 Thd.*
9	714-0118		Sq. Key 1/4" x 1/4" x 1.50" Lg.	43	14170		Index Brkt. Reinforcement
10	736-0163		Fl-Wash. 1.03" I.D. x 1.62" O.D.	46	726-0273		Plate
11	736-0171		L-Wash. 7/16" I.D.	47	731-0556		Mounting Clamp
12	710-0757		Hex Scr. 7/16-20 x 1.50" Lg.	734-1504		Hub Cap	
13	750-0762		Spacer 1.0" I.D. x 1.25" O.D.	48	710-0599		Hub Cap (5 Spoke—Optional)
14	13889		Lift Shaft Ass'y.	50	714-0111		Hex Wash. Hd. TT-Tap Scr.
15	13895		Lift Pivot Brkt. Ass'y.	51	714-0149B		1/4-20 x .5" Lg.
16	17303		Adj. Deck Lift Link	52	736-0231		Cotter Pin .09 Dia. x 1.0" Lg.
17	736-0192		Fl-Wash. 1/2" I.D. x 1.00" O.D. x .090"	53	710-0600		Int. Cotter Pin
18	714-0101		Hairpin Cotter	54	712-0206		Flat Wash. .34" I.D. x 1.12" O.D. x .125"
19	741-0295		Nyliner 5/8" I.D. x .88" Lg.	55	14399		Hex Wash. Hd. AB-Tap Scr.
20	738-0445		Shld. Bolt 5/8" Dia. x .96" Lg. 3/8-16	56	736-0264		5/16-24 x .5" Lg.
21	13790		Connecting Link	57	736-0219		Hex Nut 1/2-13 Thd.
22	714-0142		Cotter Pin 3/16" Dia. x 1.5" Lg.	60	710-0118		Deck Link
23	736-0322		Flat Wash. .44" I.D. x 1.25" O.D. x .17"	63	736-0329		Fl-Wash. .344" I.D.
24	756-0531A		Two-Step Engine Pulley	65	751-0535-46		Bell-Wash. .4" I.D. x 1.13" O.D.
25	710-0502A		Hex Wash. Hd. Scr. 3/8-16 x 1.25" Lg.	66	726-0205		Hex Bolt 5/16-18 x .75" Lg.*
26	710-0726		Hex Thd. Rolling Scr. 5/16-18 x .75" Lg.	67	710-0776A		L-Wash. 1/4" I.D.*
27	738-0435		Running Board Rod	68	17424		Fuel Line 46" Lg.
28	726-0272		Clamp	69	751-0566		Hose Clamp
29	734-0255		Air Valve	70	751-0531B		Hex AB-Tap Scr. 1/4 x .62" Lg.
30	734-1005A		Rear Wheel Ass'y. Comp.	71	16848C		Fuel Tank Strap
	734-0322		Tire Only	72	17343		Gas Tank
31	734-1015		Rear Wheel Rim Only	73	738-0482		Gas Gauge
32	736-0345		Flat Washer	74	726-0272		Seat Plate
33	710-0258		Hex Bolt 1/4-20 x .62" Lg.	75	727-0425A		Hitch Plate
				76	714-0120		Hitch Rod
							Hose Clamp
							Spring Clip (Optional)
							Sq. Key 1/4" x 3" Lg.

\*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

NOTE: The engine is not under warranty by the mower manufacturer. . . If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines-Gasoline."



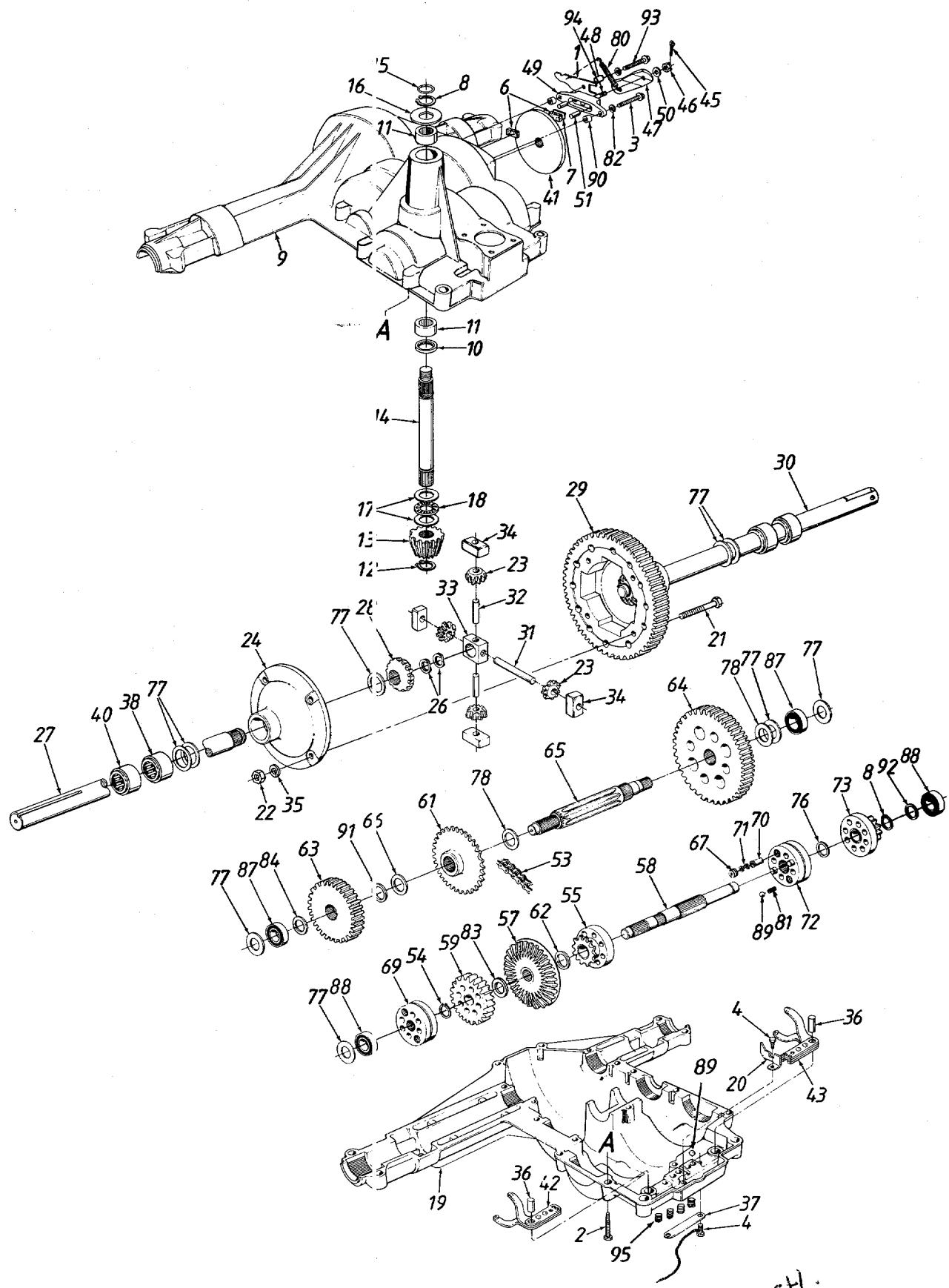
**CODE:** N notates a **new part** (not previously existing).

**COLOR:** A three digit number is the **color code**. Specify color code if color or finish is important when ordering parts. [i.e., (part no.)-638 for Red Finish]

### Color Codes

436—Radiant Yellow	638—Red
460—Green Flake	640—Green
483—Charcoal Gray	646—CM Blue
498—Yellow	650—Red Metallic
499—Beige	657—Teal
629—Silver Flake	663—Dark Teal
637—Black	

## **Models 820 thru 829; 840 thru 849**



NEEDS  
LOCK WASH.

# Models 820 thru 829; 840 thru 849

## PARTS LIST FOR MODEL 618-0009 TRANSAXLE

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	17434A	N	Brake Return Bracket	47	717-0700		Brake Actuating Arm
2	710-0809		Hex Bolt 1/4-20 x 1.25" Lg.	48	717-0796		Sq. Hd. Bolt 5/16-24 Thd.
3	710-3201		Hex Bolt 1/4-20 x 1.5" Lg. (Gr. 5)	49	717-1179		Brake Yoke
4	710-0599		Hex Wash. Tap Scr. 1/4-20 x .5" Lg.	50	736-0371		Fl-Wash. 11/32" I.D. x 7/8" O.D.
6	717-0678		Brake Puck	51	741-0343		Brake Actuating Pin
7	717-0682		Puck Plate	53	713-0326		#420 Chain 1/2 Pitch x 28 Links
8	716-0171		Retainer Ring	54	716-0133		Retainer Ring
9	717-1164		Upper Housing	55	717-1141		Reverse Sprocket Ass'y.
10	721-0253		Oil Seal	57	717-1157		Bevel Gear 47T
11	741-0525		Needle Brg. 5/8" I.D. x 7/8" O.D.	58	711-0860		Drive Shaft
12	716-0114		Snap Ring	59	717-1174		Spur Gear Ass'y.
13	717-1133		Input Pinion 15T	61	717-1182		Sprocket 22T
14	717-1134		Input Shaft	62	736-0421		Fl-Wash. .81" I.D. x 1.18" O.D.
15	732-0614		Wire Ring	63	717-1155		Spur Gear 31T
16	736-0335		Thrust Washer 5/8" I.D.	64	717-1156		Spur Gear 45T
17	736-0419		Thrust Washer	65	717-1158		Output Shaft 9T
18	741-0469		Thrust Bearing	66	717-1172		Spacer
19	717-1161		Lower Housing	67	718-0183		Shift Spring Plug
20	717-1166		Shift Guide	69	717-1167B		Forward Shift Collar
21	710-0151		Hex Bolt 3/8-24 x 2.0" Lg.*	70	717-1184		Drive Pin
22	712-3054		Hex L-Nut 3/8-24 Thd. (Gr. 5)	71	732-0590A		Drive Spring
23	717-1120		Differential Gear 10T	72	717-1168B		Creeper Shift Collar
24	717-1147		Differential Housing Cover Ass'y.	73	717-1193		Creeper Collar Plate Ass'y.
26	716-0172		Retainer Ring	76	736-0353		Fl-Wash. .65" I.D. x .97" O.D.
27	717-1112		Axle R.H.	77	**		Fl-Wash. (See Below)
28	717-1119		Differential Gear 14T	78	736-0424		Fl-Wash. 1.0" I.D. x 1.56" O.D.
29	717-1159		Differential Bull Gear 60T	80	732-0545		Ext. Spring 1.14" Lg.
30	717-1111		Axle L.H.	81	732-0659		Detent Spring
31	717-1173		Cross Shaft	82	736-0329		L-Wash. 1/4" I.D.*
32	717-1178		Cross Shaft—Special	83	736-0349		Fl-Wash. 5/8" I.D. x 1.0" O.D.
33	717-1180		Differential Pinion Block	84	736-0422		Fl-Wash. .68" x 1.12"
34	717-1190		Differential Thrust Block	87	741-0124		Ball Brg. .669" I.D.
35	736-0413		Spr. Wash. .39" I.D. x .62" O.D.	88	741-0524		Ball Bearing
36	717-1138		Shift Pin	89	741-0862		Ball Detent .25" Dia.
37	717-1139		Spring Plate	90	750-0555		Spacer .254" I.D. x .5" O.D.
38	741-1143		Axle Bearing Ass'y.	91	736-0333		Fl-Wash. .69" I.D. x 1.06" O.D.
40	717-1144		Axle Bearing Ass'y.	92	***		Fl-Wash. (See Below)
41	717-1177		Brake Disc	93	710-1225		Hex Wash Hd. Patch Bolt
42	717-1185		Shift Arm Ass'y.—R.H.	94	750-0893		1/4-20 x 2-1/4" Lg.
43	717-1186		Shift Arm Ass'y.—L.H.	—	737-0148		Spacer .256" I.D. x .75" O.D.
45	714-0111		Cotter Pin 3/32" Dia.				Shell Darina Grease 14 oz. Tube
46	712-0335		Castle Nut 5/16-24 Thd.	95	732-0598		(32 oz. Req'd.)
							Detent Spring

\*\* Ref. No. 77 736-0423 Fl-Wash. 1" I.D. x 1.56" O.D. x .010" Thk.

736-0431 Fl-Wash. 1" I.D. x 1.56" O.D. x .015" Thk.

736-0424 Fl-Wash. 1" I.D. x 1.56" O.D. x .020" Thk.

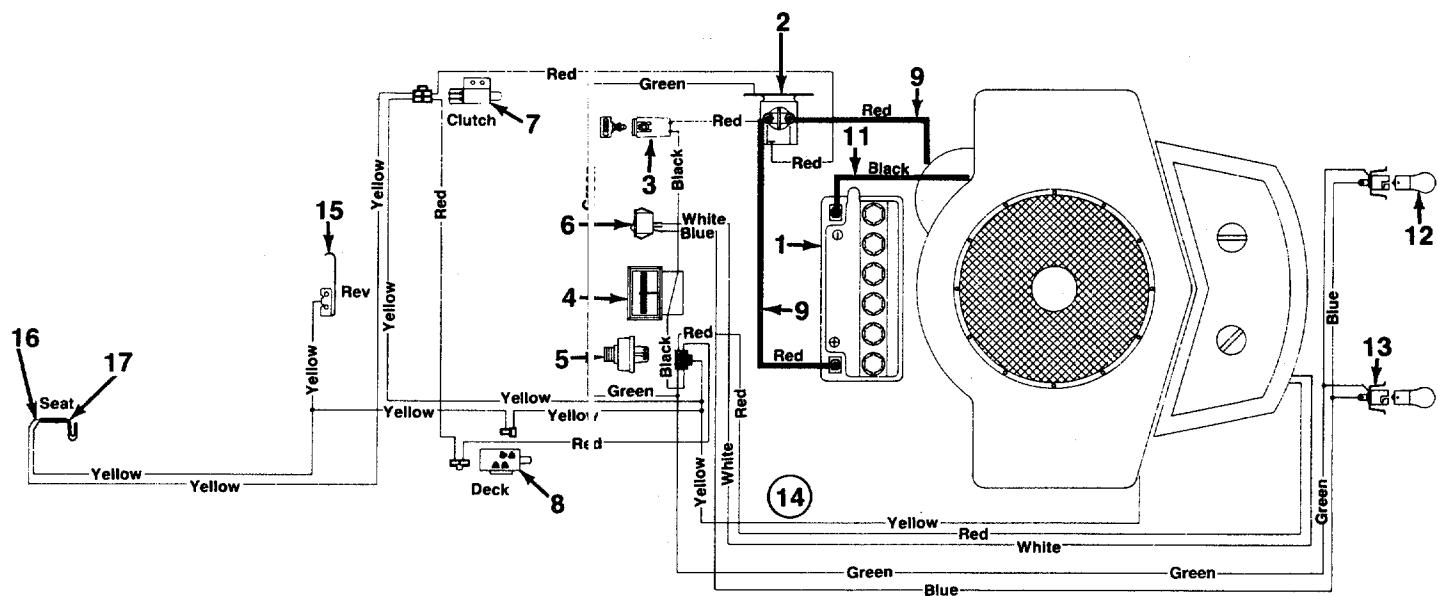
736-0420 Fl-Wash. 1" I.D. x 1.56" O.D. x .040" Thk.

\*\*\* Ref. No. 92 736-0349 Fl-Wash. 5/8" I.D. x 1.0" O.D. x .020" Thk.

736-0336 Fl-Wash. 5/8" I.D. x 1.0" O.D. x .030" Thk.

736-0337 Fl-Wash. 5/8" I.D. x 1.0" O.D. x .040" Thk.

# Models 820 thru 829; 840 thru 849



## PARTS LIST FOR ELECTRICAL SYSTEM

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	725-1635		Battery (275 Cold Crank Amps)	12	725-0963		Lamp
2	725-1426		Solenoid	13	725-1649		Socket (Style 0, 6)
3	725-1625		Fuse 7.5 Amp	14	725-1650		Socket (Style 2, 3, 4, 8, 9)
4	725-0925		Ammeter†		629-0082		Wire Harness Used w/Ammeter & Light Switch
5	725-0267		Ignition Switch		629-0075		Wire Harness Used w/o Ammeter & Light Switch
6	725-0634		Light Switch†	15	725-1643		Ammeter & Light Switch
7	725-3169A		Safety Switch (Clutch)	16	725-1303		Spring Switch (Reverse)
8	725-0465A		Safety Switch (PTO)	17	725-1439		Spring Switch (Seat)
9	725-0561		Electric Wire 14" Lg.				Spring Switch (Seat)
11	725-0996		Ground Wire 7.5" Lg.				

†Optional Parts

For Replacement Parts, Contact:

MTD PRODUCTS INC • P.O. BOX 368022 • CLEVELAND, OHIO 44136-9722